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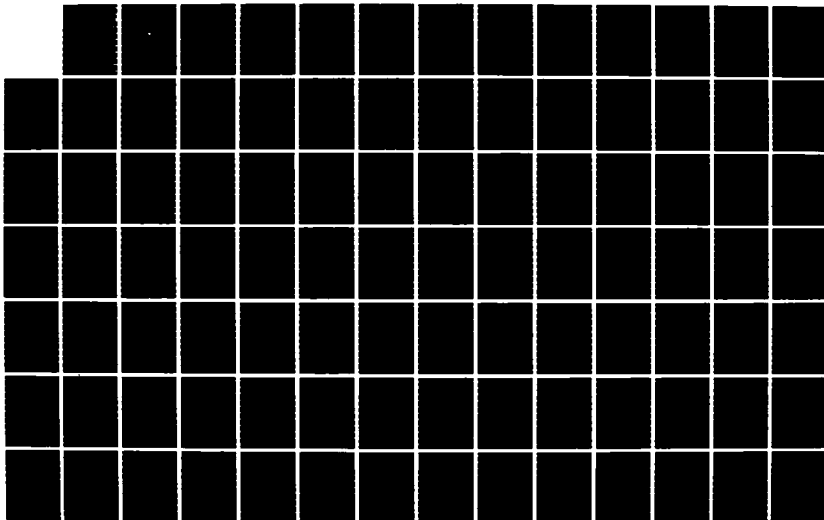
A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION(U) NAVAL  
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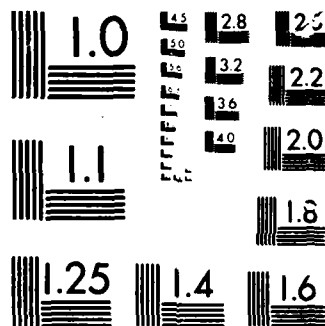
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# NAVAL POSTGRADUATE SCHOOL

Monterey, California



## THESIS

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A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS,  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION

by

Gary R. Harmeyer

March 1986

Thesis Advisor:  
Co-Advisor:

N. R. Lyons  
Tung Bui

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## REPORT DOCUMENTATION PAGE

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<p>This project serves as a prototype of an automated nursing care system. The project contains three main components: nursing diagnosis, nursing care plans, and patient classification. The objective of this project is to marry the above three nursing elements into a single integrated system.</p> <p>The program requires validation for access and patient admission capability. Doctor's orders and nurse's orders comprise major inputs for determining the elements of patient care. Patient care functions carry weighted qualifiers which input to calculate the patient classification.</p> <p>The project uses dBase III to manage the database functions and Exsys to calculate patient classification.</p>					
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Norman F. Lyons			408 646-2666		



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A Prototype Model for Automating Nursing Diagnosis, Nurse  
Care Planning and Patient Classification

by

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Lieutenant Commander, United States Navy  
B.S., University of Iowa 1975  
M.A., Webster College 1981

Submitted in partial fulfillment of the  
requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

NAVAL POSTGRADUATE SCHOOL  
March 1986

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## ABSTRACT

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3/6/83	<input type="checkbox"/>
3/7/83	<input type="checkbox"/>
3/8/83	<input type="checkbox"/>
3/9/83	<input type="checkbox"/>
3/10/83	<input type="checkbox"/>
3/11/83	<input type="checkbox"/>
3/12/83	<input type="checkbox"/>
3/13/83	<input type="checkbox"/>
3/14/83	<input type="checkbox"/>
3/15/83	<input type="checkbox"/>
3/16/83	<input type="checkbox"/>
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3/20/83	<input type="checkbox"/>
3/21/83	<input type="checkbox"/>
3/22/83	<input type="checkbox"/>
3/23/83	<input type="checkbox"/>
3/24/83	<input type="checkbox"/>
3/25/83	<input type="checkbox"/>
3/26/83	

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## I. INTRODUCTION

The appropriate time to assess the nurse's automation needs is when a hospital-wide system is being proposed. The Navy Nurse Corps is currently in this unique position. A Mission Element Needs Statement proposed the creation of the Composite Health Care System in 1979. A formal Request For Proposal allowed vendors to bid for the implementation of the system in 1985. The Composite Health Care System calls for a phased implementation process with phase one scheduled to begin in 1986. Inpatient activities, including the areas addressed in this project, occur in phase two. The Navy Nurse Corps faces a system implementation imminently. Timing dictates that the Nurse Corps seek prototypes of automated systems that best serve its needs.

This project serves as a prototype of an automated nursing care system. The project contains three main components: nursing diagnosis, nursing care plans, and patient classification. The objective of this project is to marry the above three nursing elements into a single integrated system. Meeting the objective necessitates the inclusion of the doctor's orders. The doctor's orders, in combination with the nurses's orders, reflect the independent, dependent and interdependent activities of

nursing. The combined orders serve as the foundation for the nursing care plan and the patient classification system. Departmental interfaces demand inclusion in the design of any nursing care software package.

To provide a realistic setting, the program requires validation for access and patient admission capability. The validation for entry is a necessity to safeguard patient information from unauthorized access and invasion of privacy. Patient admission capability allows for identifying and testing different patient scenarios.

This prototype project gives a partial operational solution to the planning model proposed by Rieder and Norton in "An Integrated Nursing Information System - A Planning Model." Reider and Norton state,

the processing step of classifying patients could be fully automated. The computer could process patient information and determine each patient's acuity category from the Critical Indicator parameters stored within the system. As orders and plans of care change, the computer also will update each patient's acuity category and display the results on demand. [1:78]

This program plans to show one way of automating the patient classification system using nursing diagnosis and patient care plans.

## II. PROJECT INITIATION ACTIVITIES AND BACKGROUND

This software project follows the outline presented by Pressman [2] and found in the GSA Office of Software Development publication "Establishing A Software Engineering Technology (SET)." In this publication, the Federal Software Testing Center describes SET as:

Software engineering is sometimes referred to as the discipline that brings order to the software development process. [3:3]

This software development effort concentrates on the first three of six software life cycle stages outlined by SET. These steps are requirement definition and analysis, design, and programming. The final three stages of validation, operation and review remain for a follow-on project.

### A. SCOPE

This software product limits its application to an in-hospital medical-surgical environment. The emphasis is on automating the nursing care plan activities driven by nursing diagnosis. The patient classification system uses an expert system for automation. Automating the nursing care plan activity holds potential for improving documentation, resulting in better patient care. Automating the patient classification system provides for consistency and accuracy in assigning points for all

patient care parameters. This provides for easy, rapid classification of patients giving the decision makers necessary and timely information to make effective staffing assignments.

## 8. COMPUTER/COMPUTING CONSTRAINTS

### 1. Hardware

The computer hardware chosen for this project is the IBM-PC or IBM-compatible machine. Nurse Corps Officers testing the prototype model operate available Zenith-150 microcomputers located within the nursing service departments. These microcomputers are configured with two floppy disk drives. The capacity of floppy disks to hold data delineates the maximum size of the project.

### 2. Software

This project uses off-the-shelf software. However, no current product on the market provides for both the automation of a nursing care plan and for patient classification. A versatile, multipurpose programming software package adaptable to the project design provides the means to integrate the nursing activities.

### 3. Intended User

Navy Nurse Corps functions are currently not highly automated. It is a goal of the software product development to make the system user-friendly and understandable even to the novice nurse. The system designed is for use as a tool for the professional nurse.



Stringent programming measures reduce the understanding required of the inner workings of a computer.

## C. DEFINITIONS

### 1. The Nursing Care Plan

The nurse is a manager of time, energy and resources. Conscientious planning occurs throughout the many levels of a nurse's job. The nursing care plan is at the heart of what a nurse should get accomplished for a patient. The nursing care plan allows the nurse to approach each patient with a documented plan of action. The care plan needs to contain sufficient information on the patient to make it pertinent without making it lengthy and unwieldy.

Currently, the writing of nursing care plans is not a popular activity. [4-6] Nurses agree that patient care planning is necessary. They disagree on how best to implement the documentation of nursing care plans. Education and practice direct nurses to prioritize energies on administering patient care. This is an admirable goal to strive toward, but one often infringed upon by non-patient care requirements. Animosity exists between the need to provide the necessary nursing care and the time spent documenting the care. Manual documentation currently eats up 40 per cent of a nurse's time. [7:26]

Various approaches to encourage, enable and persuade nurses to complete nursing care plans have been

tried. The Joint Commission on Accreditation of Hospitals (JCAH) requires a documented plan of care for every patient. [8:98] Texts have been published to inform nurses about suggested care planning methods. [9-10] Many hospitals establish nursing committees to provide standardized care plans. Standardized care plans attempt to save nurses the time and energy necessary to develop original care plans. They still allow individualization of plans. These attempts to simplify care plan writing activities have not succeeded. What often results is a nursing care plan written precursory to assessing the true needs of the patient. The plan rapidly outdates itself. Plans frequently need updating. The care plans lack consistency from one practitioner to another. Patient care plans written to meet JCAH requirements, fall short of matching the spirit behind them.

A possible solution to the above care planning dilemma is beginning to appear in nursing literature. In many instances that solution is a successfully implemented automated nursing system. [11-12] Where a successful automated system exists, more nurses actively develop care plans for their patients. Nurses perceive the automated plans as helpful and pertinent to the care delivered. The speed and ease of entering care plans pays dividends of better nursing care documentation. Their timely output encourages active use of the plans.

## 2. The Nursing Diagnosis

One accepted method for formulating a nursing care plan commences with a nursing diagnosis. A nursing diagnosis, as stated by Carpenito, is:

a statement that describes a health state or an actual or potential alteration in one's life processes (physiological, psychological, sociocultural, developmental, and spiritual). The nurse uses the nursing process to identify and synthesize clinical data and to order nursing interventions to reduce, eliminate, or prevent (health promotion) health alterations which are in the legal and educational domain of nursing. [13:4]

Automation was one of the catalysts behind the First National Conference on Classification of Nursing Diagnoses. Since the first conference, 52 of the most pertinent nursing diagnoses (through the Sixth National Conference of the North America Nursing Diagnosis Association), have been identified. Nursing diagnoses, along with delineating the etiology and interventions appropriate to each, has produced a national effort aimed at unifying activities in nursing. [14:xi] The nursing diagnosis approach has received broad support from the nursing community. The nursing diagnosis drives this computer project.

Numerous texts provide sample or generic statements initiated by nursing diagnosis. Many hospitals interested in implementing automated nursing care planning use standard texted plans. This program extracts examples from Doenges [15] and Crosley [16].

A nursing diagnosis is multileveled. A nursing diagnosis can be any one of the 52 approved nursing diagnoses. Each diagnosis has an assessment level. Assessment levels are defining characteristics observed by the nurse or subjectively stated by the patient. The nurse's observation or the patient's statement is relational to some etiology or underlying cause. The underlying cause statement helps the nurse evaluate realistic goals for the patient to achieve. Goal setting is the fourth level of nursing diagnosis. The final level is selecting nursing actions or nurse's orders directed toward achieving the stated goal.

### 3. Patient Classification

Patient classification is:

the grouping of patients according to an assessment of their nursing care requirements over a specified period of time. [17:8]

A valid patient classification tool enables proper staffing evaluation. This program will adopt the Navy Nurse Corps' Workload Management System for Nursing. This method of classifying patients exists in all inpatient Navy facilities. The Nurse Corps has established solid criteria-based critical indicators which this program will exploit for deriving a classification level. The classification level equates an amount of nursing time required to give patient care.

The Navy Nurse Corps is ahead of its civilian counterparts in its use of a sophisticated tool to measure patient classification level. The use of the Workload Management System worldwide has given the Nurse Corps excellent data to improve its system. The continual drawback that many manual tools have, including this one, is subjectivity and inconsistency across users. With inservice training and auditing, the Nurse Corps attempts to keep the reliability of its model high. Automating such an activity would enhance consistency and accuracy.

#### 4. Expert System

This program will introduce an expert system limited to the patient classification documentation. Ryan defines an expert system as a system capable of operating with a large knowledge database, processing information on expert level. She continues with

benefits of expert systems are that they can capture, replicate, and distribute expertise. [18:77]

As a large standardized nursing knowledge database accumulates, the application of expert systems will increase in importance.

For this project, patient classification adapts well to an expert system approach. The critical indicators and their associated value can easily fit the if-then format of most expert systems. The expert system will extract from a patient's orders the applicable critical indicator values and calculate a classification level.

### III. REQUIREMENTS DEFINITION AND ANALYSIS STAGE

The first stage of software development is the requirements definition and analysis stage. This stage defines the purpose of the system and examines the different components that ultimately make the whole. The prototype system provides the nurse with a tool to assist in the documentation of the nursing care plan and calculation of a patient classification level.

#### A. PATIENT ADMISSIONS

Nurses cannot exercise their skills without patients. The ability to bring patients into the system (admission), and have them exit the system (discharge) provides a realistic situation. The varying population number necessitates an expandable capacity for holding patient information.

#### B. NURSING CARE PLAN AND PATIENT ORDERS

A patient occupies a specific bed in a numbered room located on one of several nursing wards. After the patient arrives on the ward, doctors write orders. The nurse interviews the patient and develops a nursing care plan. The care plan consists of one or more nursing diagnoses. Each nursing diagnosis has one or more assessments, related factors, patient goals and nursing orders. The initial

doctor's and nurse's orders comprise the patient care requirements. The patient care requirements determine the patient classification level.

The orders determine the patient care requirements. Both doctor's and nurse's orders dictate nursing care activities. The calculation of a patient classification hinges on the analysis of the patient orders for relevant critical indicators.

A patient order consists of the date, the time, the order, the frequency of the order, and the practitioner initiating the order. Date and time dependency is critical for patient orders. An order's date and time determines whether the order is current or due for deletion. The order date is also important for patient classification determination. Patient orders prescribed for a specific number or repetitions (i.e. x 3 or x 12) are nonrecurring orders. Nonrecurring orders input to patient classification calculation only on the date they were issued.

The purpose of the critical indicators is to easily translate patient orders to a patient classification level in a manual system. Only those orders that closely parallel the critical indicators in the Nurse Corps' Workload Management System for Nursing need consideration.

A need exists for the user to identify a patient then move on to select patient orders. The indexing of orders to allow for logical progression aids the process.

Individual orders will need to be linked to a relevant critical indicator. Many critical indicators are time or frequency dependent. The program should tie these factors together. Patients frequently require several doctor's orders from the same section. The program would need to accommodate for some type of looping to handle multiple order entry for a single subcategory.

The practitioner is a doctor or a nurse qualified to enter patient orders. The program should have an internal check to assure that a practitioner has limited ordering access pertinent to their qualifications.

The patient's condition is dynamic. The program will need to provide an easy method to modify changes. Nursing care plans vary in length and content. Some patients have multiple nursing diagnoses, while others have only one. The program would have to accommodate for these variations.

Some method would need to be available for communicating modifications to staff members. This communication process is best if the output is in a printed format. Printed output allows for the information transmittal to staff members even when away from the computer location.



A number of nursing diagnoses in the system is desirable. Patient needs cannot be anticipated. A variety of diagnoses allows for specific selection. Because a nursing diagnosis requires documentation of assessments, related factors, goals and nurses' orders, these functions require inclusion.

#### C. TRACKING USERS AND PROGRAM SAFEGUARDS

Some input information should distinguish for the system that the current user is either a doctor or a nurse. A doctor will want to choose a ward for patient admission, identify the patient and select orders. A nurse will want to select a ward and patient but then either select a nursing diagnosis or calculate a patient classification. The doctor/nurse functions, although related by patient selection are different in nature. When users enter the system the program should identify whether they are doctors or nurses, and direct their attention to the appropriate branch of the program.

The program selectively allows access to program information to eliminate unauthorized access. The program contains hypothetical patient information. Nevertheless, addressing the privacy of sensitive patient information is relevant even in a prototype setting. Safeguards built into the system reduce the chance of successful unauthorized entry.

#### D. USING AN EXPERT SYSTEM FOR DETERMINING PATIENT CLASSIFICATION LEVEL

A self-imposed requirement of the system is to use an expert system to determine the patient classification level. This expert system should interpret the patient order as to which critical indicator applies and the frequency of its performance. The expert system then translates that information into patient care points which then calculates a patient classification level.

The use of an expert system would allow a user the option of reviewing rules used in calculating the patient classification. The patient classification tool is continually evolving. By monitoring rules and their underlying critical indicators, the user gets a visual output of the points and how they were derived.

#### IV. DESIGN STAGE

The design stage attempts to answer how the system will accomplish the requirements outlined in the requirements definition and analysis stage.

##### A. PATIENT ADMISSION CRITERIA

The need analysis pointed out the requirement for handling varying numbers of patients with set criteria on each patient. Two options to meet this requirement are an automated file system or a database system. Generalized patient data that would need to be included are: patient's first, middle and last names; their rate or rank; their family member prefix concatenated with their social security number giving a unique identifier; birthdate; age; sex; admission date; hospital registration number; medical diagnosis; physician; prognosis; allergies; as well as their nursing ward, room and bed assignments. [See Appendix A, Data Dictionary; Appendix B, Structure Chart; and Appendix C, User's Manual for additional information.]

##### B. NURSING CARE PLAN

A representative four of the 52 approved nursing diagnoses were selected due to the floppy disk capacity constraint. To some degree, every patient experiences self-care deficit when admitted to the hospital. Other diagnoses

are more applicable to some specific area in nursing. The three other nursing diagnoses reflect diagnoses frequently seen in a military hospital setting. These diagnoses are: comfort, alteration in: pain; communication, impaired: verbal; and impaired physical mobility.

Critical indicators that fall under the independent and interdependent roles of nursing need to be identified. After identification, these indicators require incorporation into the nursing order screens for selection. These critical indicators need to be back-chained to one of the four nursing diagnoses, to provide for their selection.

The critical indicators on the Patient Classification Critical Indicators [19:10] list that were identified as independent or interdependent nursing functions were: all activities of daily living except turning frame; spoon feeding adult and children patients; accompany patient off ward, other activities requiring nurse's time and special procedures; range of motion exercises; and all items listed under teaching and emotional support. This is an initial grouping, conservatively chosen.

Multiple nursing diagnoses, with their corresponding assessments, related factors, goals and nursing orders, can be handled with either a file system or a database system.

#### C. DOCTOR ORDER CRITERIA

The criteria to include doctor order categories will be to meet critical indicator requirements and provide a

representative model of patient orders. An admission section monitors the patient flow. This satisfies the critical indicators of admitting and transferring patients. An activity section captures the mobility level of a patient. A diet section captures the dietary requirements of a patient. A section provides selections of intravenous and blood products that a patient might require. Laboratory and pharmacy sections allow orders for lab tests and medications. A monitoring section allows options for monitor orders. A radiology section captures radiology test orders. A respiratory therapy and vital sign section allows orders that relate to those areas. Finally, a ward routine section captures the nursing care activities normally restricted to the ward setting.

These categories would allow for the dependent and interdependent functions of nursing, which the critical indicator list includes. Either a file or a database implementation would satisfy these requirements.

#### D. PATIENT ORDERS

Microcomputers have the ability to maintain an internal clock upon entry of the current date and time. The program would need to pick up this data from the system's clock to attach it to patient orders. The actual order length would need limitation to a number that would best suit a screen presentation format. The number of options for

time/frequency would need to include those commonly found in a medical environment.

The design should accomplish the looping for multiple orders in a single subcategory. Once selected, an order is activated and placed in an order file or database. The program returns for another order or to have the user select to move on.

#### E. USER INFORMATION

The use of a user chosen password to access the program would accommodate all of the identified requirements. Utilizing a user information database would provide for users to be added or deleted from the program. The database carries their status within the organization and provides an access level for legal entry into the program. A doctor or nurse, by signing on to the system and entering their valid password, would dictate which branch the program should route them through. The password would also limit those not authorized to use the system from entering the program.

To provide for a degree of user specialization, the design proposes four areas of access. The first is for admissions personnel. In a hospital, the admissions department is physically separate from the ward. Admissions personnel are responsible for the input of patient information. The second group is the nurses who develop the nursing care plan and determine the patient classification. The

third group is the physicians who select doctor's orders. The fourth group is the information systems personnel. Their role would be to add new users and delete obsolete ones. Access level assignments occur during routine check-in procedures of personnel. The actual assigned level would depend upon the employing department and the job position. Additionally a fifth group exists for the prototype model. This is a group of users, with passwords allowing access to all areas to aid in the testing and integration of the software model.

#### F. EXPERT SYSTEM

The expert system calls for special input consideration. A patient order consists of the order and the frequency. Major order headings (i.e. vital signs) can be categorized as a qualifier. Listed under each qualifier is its potential values (i.e. QID or less, q4h or x 6, q2h or x 12, q1h or x 24). From this system of qualifier and value, rules can be derived (i.e. vital signs QID or less receives a value of 1 patient point). By splitting the critical indicators into qualifiers and values, thus setting up conditions, the formulated rules allow the system to derive a patient classification level. (See Appendix D.)

## G. SCREEN FORMAT

User friendliness is a goal many programs strive to achieve. This program will follow many of the suggestions of Monk's text on Fundamentals of Human-Computer Interaction. [20] The program will rely on consistent screen formats which locate user instructions in the same place on each screen. After patient identification, the patient information is put on every screen so the user has no question which patient he has selected. The program will provide the user with consistent input locations. Screens are uncluttered and easy to follow. The screen color is white lettering on blue background. Although speed is not a prime consideration for this model, it influences the selection of the method of screen projection. A software utility called Flashcode creates the screen projections. Where possible, the user returns to a previous screen, or to a home base to reorient themselves. A rudimentary help facility allows on-line assistance. The help facility demonstrates its function rather than providing indepth assistance with this prototype model. [See Appendix E and Appendix F.]

## H. SOFTWARE SELECTION

With hardware choice set by the constraints of the user, software compatibility is the remaining issue. Numerous software packages exist for IBM-compatible microcomputers. Information in a database format provides



increased data flexibility and maneuverability. Some advanced programming tools provided by database software producers simplify the task of programming. These are major incentives to choose a database orientation. The database language, dBase III, has user friendly features and the capability for meeting most of the identified requirements. An area for which dBase III can only provide a partial solution is the expert system. The dBase III program has the ability to calculate patient point totals and derive a patient classification level. It lacks the option of allowing the user to see why it calculated its results in a specific way.

The expert system chosen is Exsys. Exsys is an off-the-shelf expert system that can accommodate the number of critical indicators outlined in the Navy's Nurse Corps' Workload Management System for Nursing. This software product can also do the necessary calculations required to arrive at a patient classification level.

The information format coming into Exsys requires the statement of qualifiers and values. The dBase III language accommodates for this by including the qualifier and value with each order selected. A salient feature of Exsys, that makes it especially appropriate for this design, is its ability to import data from an output file. Exsys operates as an interactive independent program using the same conditions and rules. This option is useful because of the

iterative nature of both the critical indicator development and that envisioned for this system. In addition, Exsys does allow the user to view rules used to derived a classification. A visual check of the applied rules against the individual patient order allows the achievement of greater reliability. [See Appendix D.]

## U. PROGRAMMING STAGE

The programming stage constructs a product for the user. The software product incorporates details identified in the analysis and design stages to produce a workable solution. The product's overview is presented in Figure 1.

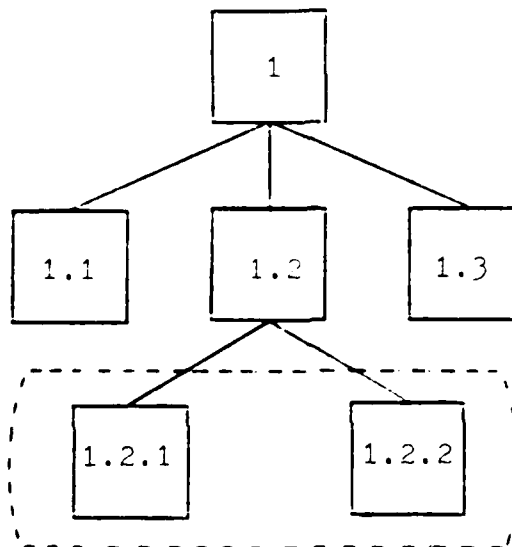


Figure 1 Nursing Prototype Product Overview

Box 1	Coordinating Module
Box 1.1	Patient Admissions
Box 1.2	Select Ward and Patient
Box 1.2.1	Select Doctor Orders
Box 1.2.2	Select Nursing Diagnosis, Nursing Orders and Patient Classification
Box 1.3	Patient Classification
[----]	Expert System [Exsys]

A modular approach was used for programming. Appendix B displays the design modular structure of the prototype system--a detailed version of Figure 1. This structure was used as a guide in program development. Programming

modularity allows the programmer to work with smaller more manageable units. This enables the programmer to easily test and debug a module before integrating it into the system. The use of comments throughout the programming effort attempts to improve the maintainability of the program. (See Appendix E for program listings.)

#### A. TRACKING USERS AND PROGRAM SAFEGUARDS

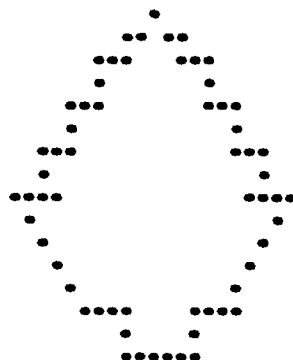
In programming modules the author has tried to minimize the number of steps required for the user to move between modules. Whenever possible, the system automatically advances the program to the next screen.

Screens are used in this chapter to demonstrate the method used to convert design details to workable solutions.

The program opens with an introductory screen (Figure 2). The screen gives information on the organizations supporting the program and identifies the author. Depressing any key advances the program to a screen requesting a password (Figure 3). Advancing beyond the second screen requires a valid password. The program compares the entered password against a database of user's passwords. If the password is a match, the user moves forward to the main branching module of the program. Incorrect passwords deny access with the opportunity to re-enter a password.

---

A    PROTOTYPE  
PROJECT  
FOR  
THE  
NAVY NURSE CORPS



BY  
GARY R. HARMEYER  
LCDR NC USN  
MARCH 1986  
NAVAL POSTGRADUATE SCHOOL  
MONTEREY, CALIFORNIA  
RELEASE 1

PRESS ANY KEY TO BEGIN

---

Figure 2      Introductory Screen

---

\*\*\* Please Sign On By Entering Password \*\*\*

---

-- Password :

---

Figure 3      Validation Screen

As a result of entering a valid password, the system now recognizes the user by name and access level [See Figure 4].

** Prototype Master Screen **		Date	Time
*** Select the Desired Option ***			
1) Admission's Department			
2) Doctor's Master			
3) Nursing Master			
4) System Administration			
0) Sign-Off			
Current User:	Select one number (0-4) ----> .		

Figure 4 Prototype Master Screen

The four user access levels available in this program are admissions personnel, nurses, doctors, and administrative personnel. The current user's name appears in the bottom left corner of each screen. Since the system now recognizes a user by name and access level, the main branching module restricts the user's entry to a branch corresponding to that access level.

The main branching module provides five options for selection. The first option, which appears on essentially every screen, is to sign-off from the system. This ends the current user's session, and returns the program to the introductory module. The other four options relate to the main sections of the program.

## B. PATIENT ADMISSIONS

The selection of admission's department advances the program to an admit/discharge option module. The admit option moves the user to a patient data input screen (Figures 5,6). Admitting a patient requires the user to input patient data to a patient information database. (See Appendix C for the User's Manual.) From this database, the program uses the patient's name, family member prefix-social security number (fmp-ssn), ward, room and bed. After entering the patient data, the user returns to the admit/discharge module.

The selection of discharge a patient moves the user to the discharge module. The user reviews and selects patients for discharge. Upon leaving the discharge module,

---

\*\*\* SELECT ADMIT / DISCHARGE OPTION \*\*\*

---

1) Admit A Patient

2) Discharge A Patient

0) Sign-Off

---

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 5 Admit/Discharge Screen

Patient Admission Form	
Last Name:	Registration No:
First Name:	Medical Diagnosis:
Mid Initial:	Physician:
Rate/Rank:	Prognosis:
FMP-SSN:        -	Allergies:
Birthdate:     /   /	Nursing Ward:
Age:	Room Number:
Sex:	Bed:
Admit Date:    /   /	

Figure 6        Patient Admission Screen

the program purges all patient records flagged for discharge. The program also purges any patient data in other databases with identical fmp-ssn identifiers. [See Appendix G.]

This module limits itself to handling primitive admit/discharge situations. Although limited, this module allows the nurse user to test a number of patient scenarios while working with the prototype system.

#### C. DOCTOR ORDER SECTION

The doctor option of the main branching module advances the physician to the nursing ward selection module. The doctor chooses between one of two nursing wards (Figure 7). A surgical and medical ward option reflects the major divisions of patients in a hospital. Options to return to



the main branching module or to sign-off the system are also provided.

A ward selection moves the program to one of two nursing wards containing six beds (Figure 8).

---

\*\* Nurse's Station Selection \*\*
 Date      Time

---

\*\*\* Select Nursing Unit to Display Patients \*\*\*

---

1) 2E Surgical ward  
 2) 3E Medical ward

0) Sign-Off
 3) Master Screen

---

Current User:	Select one number (0-3) ----> .
---------------	---------------------------------

---

Figure 7 Nurse's Station Selection Screen

---

\*\* Patient Selection \*\*
 ward 2E Surgical
Date      Time

---

\*\*\* Select Patient \*\*\*

---

RM BED	PATIENT
1) 1 A	
2) 1 B	
3) 2 A	
4) 2 B	
5) 3 A	
6) 3 B	

0) Sign-Off
 7) Master Screen

---

Current User:	Select one number (0-7) ----> .
---------------	---------------------------------

---

Figure 8 Patient Selection Screen

Patients' names, listed in the patient information database, appear in their ward, room and bed assignments. Valid options include: sign-off, return to main branching module, and selection of a patient assigned to an occupied bed.

A patient selection advances the physician to the doctor's branching module (Figure 9).

Ward	Room	Bed	Patient	Reg #	Date	Time
*** DOCTOR'S MASTER SCREEN ***						
1) Order Entry 2) Admit / Transfer / Discharge Patient 3) Review Medical Orders 4) Print Medical Orders 5) Discontinue An Order						
0) Sign-Off			6) Master Screen			
Current User:			Select one number (0-6) ----> .			

Figure 9 Doctor's Master Screen

The doctor's menu provides options for deciding on the next activity. With the exception of output forms (i.e. review of the doctor orders on screen or printed), any selection results in menu modules for doctor's orders (Figure 10). Many orders request additional order information moving the program to a time/frequency module. The doctor's order with the frequency determines a qualifier and value listing in the patient's order

Ward	Room	Bed	Patient	Reg #	Date	Time
*** SELECT WARD ROUTINE ***						
1) Ace Wrap Lower Ext	12) Lumbar Puncture	20) Simple Drag Change				
2) Chest Tube Insertion	13) N-G Insertion	21) Spec Gravity				
3) Circumcision Care	14) Paracentesis	22) Spin HCT				
4) Complex Drag Change	15) Phototherapy	23) Straight Cath				
5) EKG Rhythm Strip	16) Range of Motion	24) Surgical				
6) Foley Cath Care	Exercises (Passive)	Shave Prep				
7) Foley Cath Insertion	• Restraints	25) SS Enema				
8) Gulae Stools	17) 2-Point	26) Iap Water Enema				
9) Isolation Respiratory	18) 4-Point	27) Thoracentesis				
10) " Reverse	19) Posey	28) Tube Care (not trach)				
11) " Strict		29) Urine for S & A				
00) Sign-Off	30) Doctor's Order Screen	31) Master Screen				
Current User:			Select one number (00-31) --->			

Figure 10 Ward Routine Screen

database. Qualifier and value information transfers to the expert system. In addition, a patient point value appears in the patient order database. This number provides the option of dBase III calculating its own internal patient classification level. [See Appendix G.]

#### D. NURSING CARE PLAN AND PATIENT CLASSIFICATION FUNCTION

At the main branching module, the nursing option advances the program to the nursing ward selection module (Figure 6,7). This module, and the patient selection modules are identical to those presented to the physician. The program sets an internal flag to indicate the access level of the user. After patient selection, the nurse automatically tracks to the nursing branching module (Figure 11).

Ward Room Bed	Patient	Reg #	Date	Time
*** NURSING MASTER SCREEN ***				
1) Enter/Inactivate Nursing Care Plan		5) Review Patient Care Requirements		
2) Review Nursing Care Plan		6) Print Patient Care Requirements		
3) Print Nursing Care Plan		7) Internal Patient Classification		
4) External Patient Classification				
0) Sign-Off		8) Master Screen		
Current User:		Select one number (0-8) ----> *		

Figure 11 Nursing Master Screen

The nurse branching module provides a menu for direction for the user to proceed. Options include the selection of a new nursing care plan, modifying an existing care plan, reviewing or printing patient care requirements (consisting of all active patient orders), reviewing or printing the nursing care plan information, and determining the patient classification system.

After the nursing care plan option selection, the program advances to a module allowing for a new care plan entry or a modification of an existing care plan. The choice of a new nursing care plan provides the option of the four selected care plans [Figure 12].

All patients require a minimum of one care plan (self-care deficit). All diagnoses, assessments, goals and

nursing generated orders enter into a nursing care database (Figure 13). In addition to the nursing care database, nurse generated orders are also placed in the patient order database for inclusion in the calculation of the patient classification. (See Appendix F for additional screens.)

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT NURSING DIAGNOSIS ***				
1) Comfort, Alteration In: Pain				
2) Communication, Impaired: Verbal				
3) Impaired Physical Mobility				
4) Self-Care Deficit				
0) Sign-Off      5) Nurse's Master Screen      6) Master Screen				
Current User:		Select one number (0-6) ----> .		

Figure 12 Nursing Diagnosis Screen

Ward Room Bed	Patient	Reg #	Date	Time
**      SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS      ** ** COMMUNICATES: PAIN FREE, EXPERIENCES LESS/TOLERABLE PAIN OR OTHER GOAL **				
1) Assess Pain Factors      6) Offer PRN Medications 2) Assess & Evaluate Pain      7) Provide Emotional Support 3) Encour Pt to Use Coping Strategy      8) Schedule "Quiet Times" 4) Give Info & Explain Proc & Tests      9) Teach Alt Coping Strategies 5) Other Nursing Orders:      10) Utilize Diversional Activities [.....]				
Current User:		Select one number (01-10) --->		

Figure 13 Nursing Order Screen

If the option selected inactivates a portion of the nursing care plan, the user moves to a module for review of existing care plan entries. If an entry is inactivated, the program purges all portions related to that specific entry including the order in the patient order database.

The selection to review or print the patient care requirements consists of all active patient orders. Active orders consist of previously selected orders, and those orders selected for a specific frequency (i.e. x 2) on the date of their selection. The same criteria applies when determining patient classification (Figure 14).

---

Press -- Ctrl and S -- Keys To Pause The Scrolling If Necessary  
 Page No. 1  
 01/12/86

Date	Time	Order	Frequency	Practitioner
01/11/86	10:06:20	Teach Alt Coping Strategies		G. Harmeyer RN
01/11/86	12:08:07	Assist Bed To Wheelchair	TID	N. Lyons MD
01/11/86	13:10:15	Self/Minimum Care		G. Harmeyer RN
01/11/86	13:10:53	Keep Commode @ Bedside	TID	G. Harmeyer RN
01/11/86	14:13:47	Up in Chair w/ Assist	TID	N. Lyons MD
01/11/86	14:14:23	Diabetic Diet		N. Lyons MD
01/12/86	10:17:14	Cloride	Daily @ 0600	I. Bui MD
01/12/86	10:17:40	Sodium		I. Bui MD
01/12/86	10:18:00	Amylase		I. Bui MD
01/12/86	10:18:26	Potassium	Daily @ 0600	I. Bui MD
01/12/86	10:18:56	CO2	Daily @ 0600	I. Bui MD
01/12/86	10:19:26	CBC	Daily @ 0600	I. Bui MD
01/12/86	10:19:54	Platelets	Daily @ 0600	I. Bui MD
01/12/86	10:20:18	Glucose	Daily @ 0600	I. Bui MD
01/12/86	10:22:02	Intake & Output	TID	I. Bui MD

---

Figure 14 Patient Requirement Screen

The nurse can also select to review only the nursing care plan portion of the patient record. This enables review of the nursing care plan to determine if modifications or updating is necessary.

Two options for determining patient classification exist. The first option keeps the user in the current program, and generates a number with a corresponding patient classification level (Figure 15).

---

Patient: Mary Miser  
Is In: Category II  
Point Value Is: 27

---

Figure 15 Patient Classification Screen

Each order receives a point value based upon the order selected and the frequency for that order. Then dBase III sums these points and assigns a patient classification level. The program does not explain how this number was calculated. A less user-friendly method results when selecting the second option--that of external calculation of the patient classification. The user exits the dBase program, changes floppy disks, and runs Exsys. The patient point value and level would not change, but the expert system program displays rules used to derive the classification level.

## E. INFORMATION SYSTEM

The information system section of the program is a parallel development of the admission's department. User's of the program must have the appropriate access level to advance beyond the main branching module (Figure 3). The program limits transactions to adding another user to the system or deleting a current user (Figures 16, 17).

---

\*\*\* SELECT ADD / DELETE A USER \*\*\*

---

1) Add A User

2) Delete A User

0) Sign-Off

---

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 16 Add / Delete A User Screen

## F. PROGRAM TESTING

Testing is an aspect of the programming stage. Testing criteria are three-fold. First, procedural testing of separate modules (white-box testing) takes place as modules are completed. Next, integration testing assures modular interfaces are smooth from one program to another (black-box testing). Finally, independent use by a third party tests the program in a simulation performance. Where



testing uncovered mistakes, program modifications correct the errors.

---

USER INFORMATION

\*\*\* THIS INFORMATION IS CONFIDENTIAL \*\*\*

---

First Initial: .

Middle Initial:

Last Name:

Category of  
requestor:

Password:

Access Level:

---

Figure 17 User Information Screen

## VI. IMPLICATIONS FOR FUTURE STUDIES

Creating a hospital information system model is a time-consuming methodical process. A program using nursing diagnosis to drive nursing care plans produces a logical product. The major implications of this program center on the automation of the patient classification system.

Tying critical indicators to patient orders is an arduous task that required many iterations. The program makes assumptions about orders. This program assumes the physician knows the difference between a simple and complex dressing change (see Figure 10). The distinction between a 15 minute dressing change and 30 minute dressing change can be very subjective. Frequency of patient orders relates to almost all the critical indicators. This program separates the time/frequency options into prn [as necessary], once a day, twice a day, 3, 4, 6, 12 and 24 times a day. The latter seven options divide further into recurring orders (i.e. twice a day) verses nonrecurring orders (x 12). Recurring orders continually count toward the patient classification level until discontinued. The nonrecurring orders count only on the day ordered. Nurses calculate classification levels daily at 1400. Many nonrecurring orders are completed by that time and should not be calculated. The program counts these orders.

Duplicate orders result in duplicate point calculations. For example, if a doctor and a nurse each order passive range of motion exercises for a patient IID, the patient point total would be 8 vice the correct total of 4. The program tallies 2 points for isolation precautions regardless of the number of gown and glove changes. The correct assignment gives 2 points for every eight gown and glove changes.

In the current manual system, doctors and nurses assume that new orders supersede previous orders. If doctors and nurses hold to that assumption, this program produces inaccurate results. For example, if a patient's condition improves, the doctor writes an order for vital signs Q4h (with a patient point value of 2) without deleting the original order of vital signs Q2h (patient point value of 4). The program totals vital signs points as 6 instead of 2.

Some critical indicators do not readily convert to a patient point value. The program accommodates for three of these critical indicator exceptions. The critical indicator for apnea monitor, temperature monitor, etc. is not additive and as such translates indirectly from patient orders. The critical indicator for specific gravity, Guiac, etc. is additive across orders resulting in a point total assignment. The classification listing limits emotional support to a maximum total point value of 10.

Assigning a patient point value to these patient orders requires an intermediate variable. The calculation occurs first for the intermediate variable. This amount then feeds into the sum of other patient point values.

Medication and laboratory critical indicators presented difficulty in program translation. The program assigns points for medication and laboratory samples on a per order basis rather than on a per trip basis. The intended critical indicator for both factors assesses points on a per trip basis. The nurse actually delivers all the medications for a specific time in one trip. The nurse draws numerous lab tests with one venipuncture. The program calculates point values based on individual medication or laboratory test order. Aggregating nonintravenous medications and laboratory tests into time groups would provide accurate results. However, the effort required to program in time groups was counterproductive for this project.

The program overlooks patient situations requiring more than one staff member. Currently, all critical indicators except turning frame, which explicitly includes two staff members, calculate on a one staff member per patient basis.

To accommodate for patient orders not currently listed on the nursing order screen, an "other orders" option exists (see Figure 13). The option allows any nursing order entry. Entries in this category result in no patient points awarded to those orders. Despite their critical

indicator value, the program lacks the refinement necessary to assign a value to this order.

Many of the areas addressed can be corrected by going into the expert system's interactive mode. In this mode the program calculates entries in a more thorough manner. The trade-off for accuracy is user subjectivity in selecting applicable critical indicators. Another trade-off is the time required to traverse 85 qualifiers in a real time setting.

## VII. CONCLUSION

Automated systems exists that combine nursing diagnoses with the nursing care planning function. No automated system on the market integrates nursing diagnoses, nursing care plans and patient classification. The Navy Nurse Corps has a sophisticated patient classification tool. The tool lists critical indicators which adapt readily to automation to produce a classification level.

This thesis project is a programming effort producing a prototype software product marrying three nursing activities--nursing diagnosis, nursing care plans, and patient classification. This project demonstrates one possibility for integrating the nursing care plan using nursing diagnosis and the Navy Nurse Corps' patient classification system. The program extracts points for critical indicators from patient orders.

The greatest incentive for marrying nursing diagnosis, nursing care planning and patient classification is to improve patient care. Improved patient care results from precise documentation and uniform staffing. Nurses acknowledge the need to document plans of care to serve as a guide for all staff members. Nursing is a seven day a week, 24 hour a day profession. Care plans provide a consistent, comprehensive method for delivery of patient

care. Without this plan of care, valuable nursing time disappears while continually redefining basic patient care requirements. Successfully implemented automated systems have improved documentation by making it easier, less time-consuming, and more user gratifying.

Patient care is also enhanced through better staffing of nursing units. Staffing levels relate directly to patient care requirements determined by patient classification. The program automates the patient classification process to calculate an accurate and objective measure of patient care requirements. Staffing to a level that can be objectively quantified is a goal. Such a level assures nursing administrators their scarce nursing resources are properly utilized while at the same time providing staffing levels in keeping with safe standards of care.

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APPENDIX A  
DATA DICTIONARY

[Local looping variables omitted]

Module: Intro.Prg  
Variable Name: Flash  
Aliases: None  
Format Of Data: Character  
Allowable Value: Chr(145)  
Files Variable Used: All modules  
Comment: Flash Code specified variable, use  
in conjunction to displaying  
screens.

Module: Valid.Prg  
Variable Name: Xusepass  
Aliases: None  
Format Of Data: Character  
Allowable Value: String of 5 characters  
Files Variable Used: Valid.Prg  
Comments: A concatenation of Xusepas1 through  
Xusepas5 (single characters) to  
form the individual's password  
entry. Xusepass is compared with  
those in the Useinfo.Dbf to deter-  
if the entry received is a valid  
password.

Module: Valid.Prg  
Variable Name: Curuser  
Aliases: None  
Format Of Data: Characters  
Allowable Value: String of up to 23 characters  
Files Variable Used: All modules except Intro, Pt\_Info and  
Useinfo  
Comments: A concatenation of Ufinitial and trim  
Ulname. Is displayed on the screen  
based on password entered and name  
associated with that password in the  
Useinfo.Dbf. Curuser is also entered  
as the practitioner or nurse in the  
Orders.Dbf or Ncaredb.Dbf.

Module: Valid.Prg  
Variable Name: Useacc  
Aliases: None

Format Of Data: Numeric  
 Allowable Value: 0 - 4  
 Files Variable Used: Master.Prg  
 Comments: When a new user is entered into the  
 system an access level is assign.  
 This access level allows for privacy  
 and security in the program.

Module: Master.Prg  
 Variable Name: Omodule  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: D or N  
 Files Variable Used: Ward2 and Ward3.Prg  
 Comments: Serves as a flag when exiting the  
 Ward2 or Ward3.Prg indicating  
 which module called, those  
 pertaining to the physician staff  
 or the nursing staff.

Module: Pt\_Info.Prg  
 Variable Name: Xplname  
 Aliases: Xdclname, Plname  
 Format Of Data: Character  
 Allowable Value: 20 characters for patient's last name  
 Files Variable Used: All files except Intro, Valid, Master,  
 Ward and Useinfo.Prg.  
 Comments: Used in the Pt\_Info.Dbf and .Prg.  
 Called by Ward2 and Ward3.Prg.

Module: Pt\_Info.Prg  
 Variable Name: Xpfname  
 Aliases: Xdcfname, Pfname  
 Format Of Data: Character  
 Allowable Value: 12 characters for patient's first name  
 Files Variable Used: See discription above for Xplname.  
 Comments: See discription above for Xplname.

Module: Pt\_Info.Prg  
 Variable Name: Xpmname  
 Aliases: Xdcmmname, Pmname  
 Format Of Data: Character  
 Allowable Value: Up to 3 character string.  
 Files Variable Used: Pt\_Info and Discharg.Prg.  
 Comments: Represents the patient's middle  
 initials.

Module: Pt\_Info.Prg  
 Variable Name: Xfmpssan  
 Aliases: Xdcfssn, Fmpssan, Ptfmpssn, Mptfmpssn

and Xpt1fmpsss...Xp12fmpssn  
[Ward2/Ward3.Prg]

Format Of Data: Character  
Allowable Value: 2 digit numeric code, a "-", then  
social security number.  
Files Variable Used: See discription above for Xplname.  
Comments: See discription above for Xplname.  
The unique identifier for each  
patient. Variables with an "Xpt"  
prefix indicate they are ward,  
room and bed dependent.

Module: Pt\_Info.Prg  
Variable Name: Xpregno  
Aliases: Pregno, Ptreyno and Xpt1regno...  
Xpt12regno [Ward2/Ward3.Prg]  
Format Of Data: Character  
Allowable Value: Numeric 8 digit number  
Files Variable Used: See discription above for Xplname.  
Comments: See discription above for Xplname.  
Represents the hospital registra-  
tion number. Variables with an "X"  
prefix indicates they are ward, room  
and bed dependent.

Module: Pt\_Info.Prg  
Variable Name: Xpphy  
Aliases: Xdcpphy, Pphy and Xdcprac  
Format Of Data: Character  
Allowable Value: Up to 24 characters  
Files Variable Used: Pt\_Info and Discharg.Prg  
Comments: Represents the patient's physician.

Module: Pt\_Info.Prg  
Variable Name: Xpward  
Aliases: Pward  
Format Of Data: Character  
Allowable Value: "2E" or "3E"  
Files Variable Used: See discription above for Xplname.  
Comments: See discription above for Xplname.  
Represents a ward assignment.

Module: Pt\_Info.Prg  
Variable Name: Xprm  
Aliases: Prm  
Format Of Data: Character  
Allowable Value: "1", "2" or "3"  
Files Variable Used: See discription above for Xplname.  
Comments: See discription above for Xplname.  
Represents rooms on the ward.

Module: Pt\_Info  
 Variable Name: Xpbed  
 Aliases: Pbed  
 Format Of Data: Character  
 Allowable Value: "A" or "B"  
 Files Variable Used: See discription above for Xplname.  
 Comments: See discription above for Xplname.  
 Represents beds in a room.

Module: Discharg.Prg  
 Variable Name: Xppack  
 Aliases: None  
 Format Of Data: Logical  
 Allowable Value: .T. or .F.  
 Files Variable Used: Discharg.Prg  
 Comments: Flag to indicate if a patient had been discharged. If .T. Pt\_Info.Dbf has discharged patient's database purged.

Module: Ward.Prg  
 Variable Name: Ourpt  
 Aliases: Xpt1...Xpt12 (Ward2/Ward3.Prg)  
 Format Of Data: Character  
 Allowable Value: Xpfname + Xplname  
 Files Variable Used: All modules except Intro, Valid, Pt\_Info, Useinfo, Master and Ward.  
 Comments: Signifies which patient from the Pt\_Info.Dbf has been selected by the user. The variables with an "X" prefix indicates they are ward, room and bed dependent.

Module: Ward.Prg  
 Variable Name: Ofreq  
 Aliases: Xdcfreq, Nfreq  
 Format Of Data: Character  
 Allowable Value: Blank, options in Time.Prg or options in IUC.Prg.  
 Files Variable Used: All order modules (Transfer, Activity, IVA, Lab, Monitor, Pham1, Pham2, Xray, Xray, Diet, Lung, Routine, US and all Norder\*.Prg)  
 Comments: Indicates frequency of any ordered action.

Module: Ward.Prg  
 Variable Name: Passdata  
 Aliases: None  
 Format Of Data: Character

Allowable Value: "Q" number space number  
Files Variable Used: All order modules (see Ofreq)  
Comments: Used to pass data to the external  
expert system. Indicates qualifier  
and value to be used.

Module: Ward.Prg  
Variable Name: Ptpoint  
Aliases: Xpoints  
Format Of Data: Numeric  
Allowable Value: Positive integers >= 0  
Files Variable Used: All order modules (see Ofreq)  
Comments: Assigns points to orders selected by  
user to be used in determining the  
patient classification system.

Module: Ward.Prg  
Variable Name: Todayonly  
Aliases: None  
Format Of Data: Logical  
Allowable Value: .T. or .F.  
Files Variable Used: All order modules (see Ofreq)  
Comments: Assigns a .T. for orders of one day  
frequency for the patient  
classification system.

Module: Ward.Prg  
Variable Name: Monpoint  
Aliases: Xmonpt  
Format Of Data: Numeric  
Allowable Value: Integers 0 or 6  
Files Variable Used: All order modules (see Ofreq)  
Comments: Used to evaluate orders in the Monitor  
.Prg but included in the Orders.Dbf  
to determine patient classification.

Module: Ward.Prg  
Variable Name: Emopoint  
Aliases: Xemopt  
Format Of Data: Numeric  
Allowable Value: Positive integers >= 0  
Files Variable Used: All order modules (see Ofreq)  
Comments: Used to evaluate orders in the Emosup  
.Prg but included in the Orders.Dbf  
to determine patient classification.

Module: Ward.Prg  
Variable Name: Roupaint  
Aliases: Xroutpt  
Format Of Data: Numeric

Allowable Value: Positive integers  $\geq 0$   
 Files Variable Used: All order modules [see Ofreq]  
 Comments: Used to evaluate orders in the Routine  
                   .Prg but included in the Orders.Dbf  
                   to determine patient classification.

Module: Word.Prg  
 Variable Name: Ptselect  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Prm + Pbed + (Xpt1 or Xpt2 ... Xpt12)  
 Files Variable Used: All modules except Intro, Valid,  
                       Pt\_Info, Useinfo and Master.  
 Comments: Signifies which patient, the room and  
                   bed for screen headers.

Module: Word.Prg  
 Variable Name: Morder  
 Aliases: Order, Xdcorder, Nord  
 Format Of Data: Character  
 Allowable Value: Character string up to 27  
 Files Variable Used: All order modules [see Ofreq]  
 Comments: Patient orders requiring action on the  
                   part of the hospital staff.

Module: Doctor.Prg  
 Variable Name: Dmenu  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: "1" or " "  
 Files Variable Used: Doctor, Doc\_Menu and all order  
                       modules [exc. Norder\*.Prg].  
 Comments: Flag to indicate if a return is to the  
                   Master.Prg module or to a doctor  
                   level module.

Module: Time.Prg  
 Variable Name: Timeopt  
 Aliases: None  
 Format Of Data: Numeric  
 Allowable Value: 1 - 41  
 Files Variable Used: All order modules [see Ofreq] except  
                       Transfer.Prg  
 Comments: Used to determine frequency of order.

Module: Time.Prg  
 Variable Name: Xtime  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 4  
 Files Variable Used: Time.Prg

Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 19  
 Files Variable Used: Emosup and Teach.Prg  
 Comments: Recieves input for Ncaredb.Dbf related  
 to the teaching and emotional  
 requirements of the patient.

Module: N\_Diag.Prg  
 Variable Name: Nrelate  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 25  
 Files Variable Used: Relate\_1...Relate\_4.Prg  
 Comments: Recieves input for Ncaredb.Dbf related  
 to why the patient has the nursing  
 diagnosis chosen.

Module: N\_Diag.Prg  
 Variable Name: Ngoal  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string 38  
 Files Variable Used: Goal\_1...Goal\_4.Prg  
 Comments: Recieves input for Ncaredb.Dbf related  
 to goal achieveable by the patient.

Module: N\_Diag.Prg  
 Variable Name: Nassess  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 27  
 Files Variable Used: Assess\_1...Assess\_4.Prg  
 Comments: Recieves input for Ncaredb.Dbf  
 relating objective observations and  
 subjective information to the nur-  
 sing diagnosis selected.

Module: N\_Diag.Prg  
 Variable Name: Assoth  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 27  
 Files Variable Used: Assess\_1...Assess\_4.Prg  
 Comments: Allows an assessment of the patient  
 not currently provided on the  
 screen to be entered.

Module: N\_Diag.Prg  
 Variable Name: Reloth



Comments: Provides an option for a time of day  
that is not provided on the screen.

Module: IVA.Prg  
Variable Name: Morder1  
Aliases: None  
Format Of Data: Character  
Allowable Value: "Start IV of"  
"Alternate IV w/"  
"Follow IV w/"  
"Interrupt IV for"  
"Start 2nd IV of"

Files Variable Used: IVA and IVB.Prg  
Comments: Initial portion of the patient order  
for IV therapy.

Module: IVB.Prg  
Variable Name: Blood  
Aliases: None  
Format Of Data: Logical  
Allowable Value: .T. or .F.  
Files Variable Used: IVB and IVC.Prg  
Comments: Flag to indicate whether blood was  
ordered or not. Significant in the  
determining of patient  
classification points.

Module: Lung.Prg  
Variable Name: Xliter  
Aliases: None  
Format Of Data: Character  
Allowable Value: "@ 1-2 l/m"  
"@ 3-4 l/m"  
"@ 5-6 l/m"  
"@ 7-8 l/m"  
"@ 9-10 l/m"  
Files Variable Used: Lung.Prg  
Comments: Xliter is concatenated with the screen  
selection to indicate oxygen flow  
rate for the patient.

Module: Discont.Prg  
Variable Name: Xdcdate  
Aliases: Odate  
Format Of Data: Date  
Allowable Value: Date of the medical order  
Files Variable Used: Discont.Prg  
Comments: Allows user to review date of an order  
to determine if medical order should  
be discontinued.

Module: Discont.Prg  
 Variable Name: Xordpack  
 Aliases: None  
 Format Of Data: Logical  
 Allowable Value: .T. or .F.  
 Files Variable Used: Discont.Prg  
 Comments: Flag to indicate if medical orders are  
 to be discontinued. If .T., deleted  
 orders are purged from the  
 Orders.Dbf.

Module: Nurse.Prg  
 Variable Name: Nmenu  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: "1" or " "  
 Files Variable Used: Nurse, Nurse1, and N\_Diag.Prg  
 Comments: Flag to indicate if a return is to the  
 Master.Prg module or to Nurse.Prg  
 module.

Module: Nurse.Prg  
 Variable Name: Xlevel  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: "Category I"  
 "Category II"  
 "Category III"  
 "Category IV"  
 "Category V"  
 "Category VI"  
 Files Variable Used: Nurse.Prg  
 Comments: Indicates patient classification  
 level.

Module: N\_Diag.Prg  
 Variable Name: Nursdiag  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: "Comfort, Alteration In: Pain"  
 "Communication, Impaired: Verbal"  
 "Impaired Physical Mobility"  
 "Self-Care Deficit"  
 Files Variable Used: N\_Diag.Prg  
 Comments: Nursdiag is of the four values  
 indicated, and directs which branch  
 the program will follow.

Module: N\_Diag  
 Variable Name: Emoteach

Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string of 25  
 Files Variable Used: Relate\_1...Relate\_4.Prg  
 Comments: Allows a related factor not currently  
 provided on the screen to be  
 entered.

Module: N\_Diag.Prg  
 Variable Name: Gooath  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string 38  
 Files Variable Used: Goal\_1...Goal\_4.Prg  
 Comments: Allows a patient's goal not currently  
 provided on the screen to be  
 entered.

Module: N\_Diag.Prg  
 Variable Name: Ordoath  
 Aliases: None  
 Format Of Data: Character  
 Allowable Value: Character string 27  
 Files Variable Used: Norder\*.Prg  
 Comments: Allows for a nursing order not cur-  
 rently provided on the screen to be  
 entered.

Module: Useinfo  
 Variable Name: Xufinitial  
 Format Of Data: Character  
 Allowable Value: Any first initial of user  
 Files Variable Used: All modules (except Intro and Valid) as a  
 concatenation with Xulname.

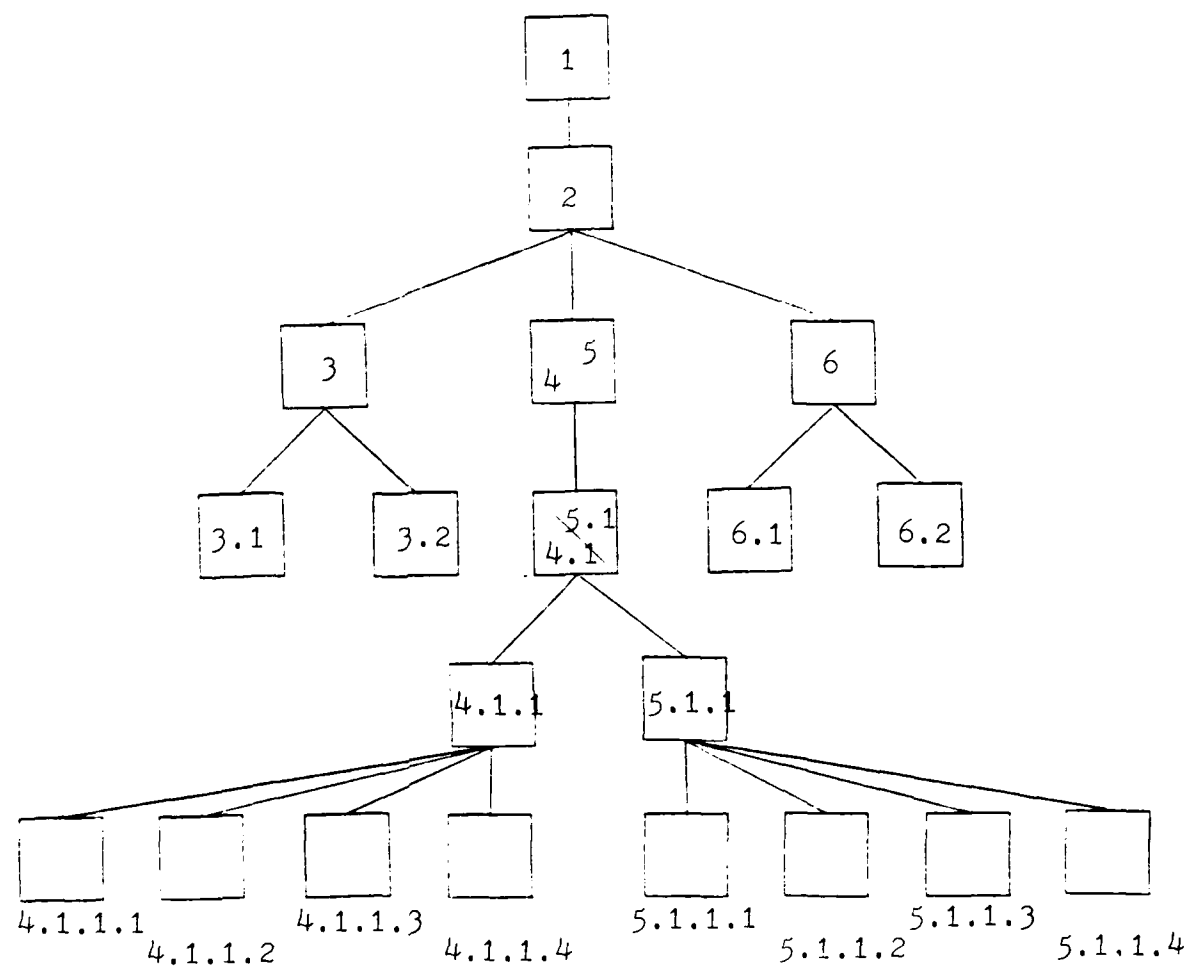
Module: Useinfo.Prg  
 Variable Name: Xulname  
 Aliases: Xdlulname  
 Format Of Data: Character  
 Allowable Value: Character string of length 20  
 Files Variable Used: All modules (except Intro and Valid)  
 as a concatenation with Xufinitial.  
 Comment: Character string representing the  
 user's last name. Used as a concat-  
 enation with Xufinitial to form  
 Curuser.

Module: Useinfo  
 Variable Name: Xcodeword  
 Format Of Data: Character

Allowable Value: Any 5 characters representing a user's  
password  
Files Variable Used: Valid.Prg

Module: Useinfo  
Variable Name: Xaccess  
Format Of Data: Numeric  
Allowable Value: 0, 1, 2, 3, or 4  
Files Variable Used: Master.Prg

APPENDIX B  
STRUCTURE CHART



## Legend for Structure Chart

- \* -- Box labelled 1  
Box Description: Do Introduction/Validate User
- \* -- Box labelled 2  
Box Description: Choose Path
- \* -- Box labelled 3  
Box Description: Do Admission Department
- \* -- Box labelled 3.1  
Box Description: Admit Patient
- \* -- Box labelled 3.2  
Box Description: Discharge Patient
- \* -- Box labelled 4/5  
Box Description: Select Ward
- \* -- Box labelled 4.1/5.1  
Box Description: Select Patient
- \* -- Box labelled 4.1.1  
Box Description: Select Doctor Option
- \* -- Box labelled 4.1.1.1  
Box Description: Select Medical Orders
- \* -- Box labelled 4.1.1.2  
Box Description: Discontinue Order
- \* -- Box labelled 4.1.1.3  
Box Description: Admit/Transfer/Discharge Patient
- \* -- Box labelled 4.1.1.4  
Box Description: Print/Review Orders
- \* -- Box labelled 5.1.1  
Box Description: Select Nursing Option
- \* -- Box labelled 5.1.1.1  
Box Description: Select Nursing Care Plan
- \* -- Box labelled 5.1.1.2  
Box Description: Review/Print Nursing Care Plan

\* -- Box labelled 5.1.1.3

Box Description: Review/Print Patient Care Requirements

\* -- Box labelled 5.1.1.4

Box Description: Determine Patient Classification Level

\* -- Box labelled 6

Box Description: Do Data Processing Department

\* -- Box labelled 6.1

Box Description: Add New User

\* -- Box labelled 6.2

Box Description: Delete User

## APPENDIX C

### USER'S MANUAL

This software product is a prototype model for the Navy Nurse Corps. The user's manual, as well as the software product, presupposes a working knowledge of medicine and the normal functioning of a hospital. The user's manual and the software product require a working knowledge of the nursing process using the nursing diagnosis and the patient classification system.

This manual contains four subdivisions: the admission's department section, the physician section, the nursing section and the system's administration section. The admission's department section allows patients to be admitted or discharged. Admission of a patient allows the selection of doctor's and nursing orders. Admission of a patient also initiates the determination of the patient classification. The system administration section allows users access to all or only one of the program sections.

#### I. Beginning the Program

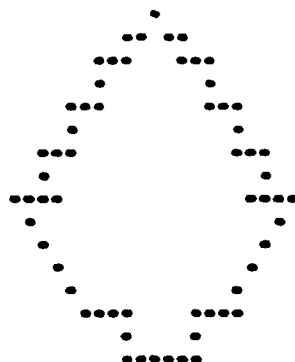
To begin the program insert disk A:1 into drive A (normally the left sided drive, or the top drive) of your IBM, or compatible, personal computer. The computer should have 640K of internal memory. Next insert disk B:1 into drive B. Turn on the power for the monitor, disk drives (the computer), and printer (for written reports). The first prompt is for the date. The date format of 4-1-86 is acceptable. The computer also accepts a date format of 4-1-1986. Follow this with <enter>. The next prompt is for time. The format of 14:45 is the least number of keystrokes, however the computer accepts seconds as well (ie. 14:45:30) <enter>. An A> prompt then appears. To begin the program, type b:proto (capital, mixed or small letters) <enter>.

A manufacturer's introductory screen appears with a prompt of: "Insert System Disk 2 and press ENTER or type CTL-C to abort". Remove disk A:1 and insert disk A:2 into drive A and press <enter>. Another manufacturer's introductory screen temporarily flashes on the monitor. A screen with a Nurse Corps oakleaf and background information, Figure 1, replaces this screen.



---

A PROTOTYPE  
PROJECT  
FOR  
THE  
NAVY NURSE CORPS



BY  
GARY R. HARMEYER  
LCDR NC USN  
MARCH 1986  
NAVAL POSTGRADUATE SCHOOL  
MONTEREY, CALIFORNIA  
RELEASE 1

PRESS ANY KEY TO BEGIN

---

Figure 1

### Program Passwords

To begin the program press any key to move to Figure 1a which requires the input of a five letter password. Sample passwords for this program are: level 0 -- mouse, level 1 -- lyons, level 2 -- flyup, level 3 -- littl, and level 4 -- getgo. The password allows access further into the program, and level indicates which area a user may enter. Regardless of password used (provided it is an acceptable password, see System's Administration section) the next screen is Figure 2.

** Prototype Master Screen **		Date	Time
*** Select the Desired Option ***			
1) Admission's Department			
2) Doctor's Master			
3) Nursing Master			
4) System Administration			
0) Sign-Off			
Current User:	Select one number (0-4) ----> .		

Figure 2

This screen, the Prototype Master Screen provides a branching point to the four major areas. Depending upon the password used and option chosen, the program moves to Figure 3, 4, 5 or 6. Sign-Off is an option given on most screens to return to Figure 1.

## II. Admission's Department Personnel

Access level 0 or 1 will allow access to the Admit/Discharge screen (Figure 3).

---

\*\*\* SELECT ADMIT / DISCHARGE OPTION \*\*\*

---

1) Admit A Patient

2) Discharge A Patient

0) Sign-Off

---

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 3

A patient can be admitted or discharged, depending on the option selected. Selecting option 1. moves the user to Figure 3.1. This information creates a patient database file.

#### The Patient Admission Form

The Patient Admission Form (Figure 3.1) consists of 17 input areas.

Patient Admission Form	
Last Name:	Registration No:
First Name:	Medical Diagnosis:
Mid Initial:	Physician:
Rate/Rank:	Prognosis:
FMP-SSN:        -	Allergies:
Birthdate:     /   /	Nursing Ward:
Age:	Room Number:
Sex:	Bed:
Admit Date:    /   /	

Figure 3.1

After typing each category, press <enter> to move to the next category. The amount of information and the acceptable inputs are as follows.

- Last Name: Allows up to 20 letters in the patient's last name and automatically capitalizes the first letter.
- First Name: Allows up to 12 letters in the patient's first name and automatically capitalizes the first letter.
- Mid Initial: Allows up to 3 letters in the patient's middle name to accomodate for No Middle Name (NMN). Capitalizes all letters entered.
- Rank/Rate: Accepts up to 11 letters and capitalizes all letters entered. Typical formats would include MS3/N/AD, COL/AF/RET or CIVILIAN.
- FMP-SSN: Family Member Prefix (FMP) Code includes the sponsor's Social Security Number (SSN). Valid FMP code numbers and relationships are:
- 01 Sponsor's oldest child (includes stepchildren)
  - 02 Sponsor's next oldest child
  - 03, 04, etc. Sponsor's third oldest, etc.
  - 20 Sponsor (active duty, reserve and retired uniformed services personnel: Army, Navy, Air Force, Marine Corps, Coast Guard, Public Health Service)

	and National Oceanic and Atmospheric Administration)
30	Sponsor's spouse
40	Sponsor's dependent mother
45	Sponsor's dependent father
50	Sponsor's dependent mother-in-law
55	Sponsor's dependent father-in-law
60,61, etc.	Other authorized sponsor's dependents
00	All other authorized personnel (foreign nationals, including foreign military, civilian humanitarians, etc.)

Birthdate: Use the format 08/25/50.

Age: Allows up to 3 letters or numbers. Mixing numbers and letters is possible to accommodate for 11M [11 months old] or 15D [15 days old]. Age denotes years unless M or D are filling the third input space.

Sex: Allows one letter input. Valid letters are:

M - Male  
F - Female  
U - Unknown

Admit Date: Use the format 12/13/85.

Registration No: The local hospital sequential number of in-patients admitted during a specified period of time.

Medical Diagnosis: Diagnosis listed by the admitting physician and listed on the admission authorization form. Enter up to 24 letters.

Physician: Patient's assigned physician, not necessarily the admitting practitioner. Enter up to 24 letters.

Prognosis: Allows entry of up to 3 letters. Allowable prognosis codes and descriptions are:

E      Excellent  
F      Fair  
G      Good  
U      Unknown  
GRD    Guarded  
P      Poor

Allergies: Patient's allergies as stated in the health record, or by the patient. Enter up to 24 letters.

Nursing Ward: Two wards are possible: 2E (a surgical ward) or 3E (a medical ward).

Room Number: Room number is tentatively assigned by the admission department, pending confirmation by the ward personnel. Room number options are 1, 2, or 3.

Bed: Actual bed assignment combines a room number and a bed letter. Bed letter is tentatively assigned by the admission department, pending confirmation by the ward personnel. Bed letter options vary between A and B. Once the patient file is complete, the program returns to Figure 3 for another selection.

### Discharging a Patient

Selection 2 [Figure 3] moves the user to Figure 3.2 [Discharge A Patient Screen]. A patient is uniquely identified by listing of FMP-SSN. The screen displays one patient's FMP-SSN, name and practitioner at a time so the user can decide which patient to discharge. The user can discharge more than one patient before returning to the Admit/Discharge Screen [Figure 3].

### III. Physician Personnel

Figure 2 [Prototype Master Screen] has two valid choices for the physician, 0 [Sign-Off] and 2 [Doctor's Master]. Option 0 returns the physician to the Introductory Screen [Figure 1]. This selection implies intent to leave the computer session.

### Selecting a Patient

Selection 2 [Doctor's Master] advances the physician to Figure 4 [Nurse's Station Selection]. The physician is able to choose patient ward or return to the previous screen [Figure 2].

---

\*\* Nurse's Station Selection \*\*
 Date      Time

---

\*\*\* Select Nursing Unit to Display Patients \*\*\*

---

1) 2E Surgical Ward  
 2) 3E Medical Ward

---

0) Sign-Off
 3) Master Screen

---

Current User:	Select one number (0-3) ----> .
---------------	---------------------------------

---

Figure 4

---

\*\* Patient Selection \*\*
 Ward 2E Surgical
Date      Time

---

\*\*\* Select Patient \*\*\*

---

RM BED	PATIENT
1) 1 A	
2) 1 B	
3) 2 A	
4) 2 B	
5) 3 A	
6) 3 B	

---

0) Sign-Off
 7) Master Screen

---

Current User:	Select one number (0-7) ----> .
---------------	---------------------------------

---

Figure 4.1a

Selection 1 (Figure 4) follows with Figure 4.1a (Patient Selection for Ward 2E). Patients assigned to Ward 2E by the admissions department appear in their room and bed assignments. Choosing any one of the six patients advances the user to Figure 4.1.1, the Doctor's Master Screen.

ward	Room	Bed	Patient	Reg #	Date	Time
*** DOCTOR'S MASTER SCREEN ***						
1) Order Entry 2) Admit / Transfer / Discharge Patient 3) Review Medical Orders 4) Print Medical Orders 5) Discontinue An Order						
0) Sign-Off			6) Master Screen			
Current User:			Select one number (0-6) ----> *			

Figure 4.1.1

Ward, room, bed, patient and registration number appears on the second line of each of the screens to assure proper patient identification is present. The identical sequence follows for selection 2 (Patient Selection for Ward 3E). Master Screen is an option on most screens and differs slightly from the Sign-Off option. Sign-Off is the appropriate selection if the computer session is over. Master Screen allows the user to select a different patient to enter orders on without requiring the physician to redo the user identification process.

#### Doctor Selection Categories

Figure 4.1.1 (Doctor's Master Screen) is a branching screen. Selection 1 advances the user to Figure 4.1.1.1 (Doctor's Order Menu). This option allows the physician to enter patient orders associated with medical treatment. Selection 2 moves the user to Figure 4.1.1.2 (Admit/Transfer/Discharge Screen). These orders impact the admission's department as well as the patient care areas. The admissions department must enter the patient into the computer system prior to their selection by the physician for order entry. The selection of ADMIT officially enters the patient admission status in the doctor's orders.



ward	Room	Bed	Patient	Reg #	Date	Time
*** DOCTOR'S ORDER MENU ***						
1) Activity			6) Pharmacy			
2) Diet			7) Radiology			
3) IO's / Blood			8) Respiratory Therapy			
4) Laboratory Tests			9) Vital Signs			
5) Monitoring			10) Ward Routines			
00) Sign-Off		11) Doctor's Master Screen		12) Master Screen		
Current User		Select one number (00-12) ---> ..				

Figure 4.1.1.1

### Reviewing Patient Orders

Selection 3 and 4, of the Doctor's Master Screen vary only in the location of their output. Selection 3 displays patient medical orders on the monitor screen. Figure 4.1.1.3, is a screen output to review medical orders.

---

Patient Orders For: Mary Miser

Press -- Ctrl and S -- Keys to Pause The Scrolling If Necessary

Page No. 1  
01/12/86

Date	Time	Order	Frequency	Practitioner
01/11/86	14:13:47	Up in Chair w/ Assist	TID	N. Lyon MD
01/11/86	14:14:23	Diabetic Diet		N. Lyon MD
01/11/86	14:15:41	Start IV of .45 NaCl	Infuse o 8Hr	N. Lyon MD
01/12/86	10:17:14	Cloride	Daily @ 0600	N. Lyon MD
01/12/86	10:17:40	Sodium		N. Lyon MD
01/12/86	10:18:00	Amylase		N. Lyon MD
01/12/86	10:18:26	Potassium	Daily @ 0600	N. Lyon MD
01/12/86	10:18:56	CO2	Daily @ 0600	N. Lyon MD
01/12/86	10:19:26	CBC	Daily @ 0600	N. Lyon MD
01/12/86	10:19:54	Platelets	Daily @ 0600	N. Lyon MD
01/12/86	10:20:18	Glucose	Daily @ 0600	N. Lyon MD

---

Figure 4.1.1.3

Selection 4 provides the same medical order output on the printer. Selection 5 (Discontinue An Order) advances the physician to Figure 4.1.1.4. The screen displays each medical order on the selected patient with the option to discontinue any obsolete orders.

### Selecting Doctor's Orders

The Doctor's Order Menu (Figure 4.1.1.1) provides a menu to select a medical treatment category. A rudimentary selection list of medical orders follows each of the ten major headings. Selection 1 (Figure 4.1.1.1) moves the program to Figure 4.1.1.1a.

ward	Room	Bed	Patient	Reg #	Date	Time
*** SELECT ACTIVITY LEVEL ***						
1) Ambulate ad lib			7) Dangle Legs			
2) Ambulate w/ Assistance			8) Keep on Back			
3) Strict Bedrest			9) May Shower			
4) Bedrest w/ BRP			10) Turn Patient			
5) Bedside Commode			11) Turning Frame			
6) OOB to Stretcher w/ Assist			12) Up in Chair w/ Assist			
0) Sign-Off		13) Doctor's Order Screen		14) Master Screen		
Current User:			Select one number (00-14) --->			

Figure 4.1.1.1a

Twelve selection criteria follow. When entering a number less than 10, enter either 03 or 3 <enter> to advance the program. Some selections request a time or frequency. These selections are 2, 6, 7, 10, 11, and 12, which move the program to Figure 4.1.1.1b (Select Time/Frequency Option). A list of 39 options follow. Selection 40 is a brief on-line help facility (Figure 4.1.1.1c). A selection of 41 returns the program to the previous screen with no frequency indicated for that order. Options 5, 8, 9, 24, 29, 33, 35, 37 and 39 are one time selections. All other options are ongoing until discontinued.

ward Room Bed	Patient	Reg #	Date	Time
*** SELECT TIME/FREQUENCY OPTION ***				
1) PRN	• Daily @	20) 2200	30) Q Shift	
2) Q 1-2 Hr PRN	10) 0200	21) 2400	31) Q12	
3) Q 2-3 Hr PRN	11) 0400		32) Q 6 Hr	
4) Q 3-4 Hr PRN	12) 0600	22) BID	33) x 4	
	13) 0800	23) Q 12 Hr	34) Q 4 Hr	
5) On Call	14) 1000	24) x 2	35) x 6	
6) QD	15) 1200	25) TID		
7) HS	16) 1400	26) AC	36) Q 2 Hr	
8) x 1	17) 1600	27) PC	37) x 12	
9) Today @	18) 1800	28) Q 8 Hr	38) Q 1 Hr	
	19) 2000	29) x 3	39) x 24	
40) Help		41) Return to Calling Screen		
Current user		Select one number (01-41) ----> ..		

Figure 4.1.1.1b

Selection 2 from the Doctor's Order Menu (Figure 4.1.1.1) provides possible diet options for the selected patient. Options 17 and 18 move the program to Figure 4.1.1.1b (Select Time/Frequency Option). Selection 17 requires the number of bags per 24 hours for continuous tube feedings. Selection 18 requires a frequency for bolus tube feedings.

Selection 3 from the Doctor's Order Menu (Figure 4.1.1.1) provides possible intravenous/blood options. The screen design varies from other medical treatment order screens, to accommodate for the unique characteristics of this order line. Select IV Order (Figure 4.1.1.1e) is the first screen of a series of three. Select IV Order has up to 10 selections. Selections 6 through 8 are one time orders which then returns to the program for another selection. Selection 1 through 5 moves the program to Select IV Solution (Figure 4.1.1.1f). This requires a selection from options 1 through 8. The program moves to Select Infusion Rate (Figure 4.1.1.1g) for the user to select the desired fluid infusion rate. Following the selection of infusion rate, the program returns to Select IV Order (Figure 4.1.1.1e).

Selection 4 from the Doctor's Order Menu (Figure 4.1.1.1) displays laboratory test options. For each selection on the Select Laboratory Test (Figure 4.1.1.1h), the program moves to the Select Time/Frequency Option

(Figure 4.1.1.1b). Selections are for additional information regarding the order.

Selection 5 from the Doctor's Order Menu (Figure 4.1.1.1) provides possible monitoring options. For some selections on the Select Monitoring Requirements screen (Figure 4.1.1.1i), the program moves to the Select Time/Frequency Option (Figure 4.1.1.1b) for additional information. The selections requiring time or frequency information include 3, 5, 6, 7, 8, 9, 11, 12, 12, and 15. Other selections are continuous.

Selection 6 from the Doctor's Order Menu (Figure 4.1.1.1) provides pharmacy options. For all selections on the Select Desired Medication / Dosage screens (Figure 4.1.1.1j and Figure 4.1.1.1k), the program moves to the Select Time/Frequency Option (Figure 4.1.1.1b) for frequency of dosage. Each screen contains divisions of major drug categories, of individual drugs, and dosage. A help facility follows (Figure 4.1.1.1l) clarifying route abbreviations used on the screen.

Selection 7 from the Doctor's Order Menu (Figure 4.1.1.1) provides radiology options. For all selections on the Select Xray screen (Figure 4.1.1.1m), the program moves to the Select Time/Frequency Option (Figure 4.1.1.1b) for additional scheduling information.

Selection 8 from the Doctor's Order Menu (Figure 4.1.1.1) provides possible respiratory therapy options. For each selection on the Select Respiratory Therapy Options screen (Figure 4.1.1.1n), except 7 (Ventilator is continuous), the program moves to the Select Time/Frequency Option (Figure 4.1.1.1b). After selecting a route (option 9 through 13), a flow rate (letter A-E) selection follows.

Selection 9 from the Doctor's Order Menu (Figure 4.1.1.1) provides possible vital signs options. For some selections on the Select Vital Sign Option screen (Figure 4.1.1.1o), the program moves to the Select Time/Frequency Option (Figure 4.1.1.1b). Time/Frequency Option screen provides selections for additional information with options 1 and 5 through 11. Departmental policy defines selections 2 through 4.

Selection 10 from the Doctor's Order Menu (Figure 4.1.1.1) provides ward routine selection. For many selections on the Select Ward Routine screen (Figure 4.1.1.1p), the program moves to the Select Time/Frequency

Option (Figure 4.1.1.1b) for added information. Selections advancing the program to the Time/Frequency screen are: 3, 4, 6, 8, 16, 20-23, 28 and 29. Selections regarded as one time only orders are: 2, 5, 7, 12-14 and 24-27. All other selections are ongoing until discontinued (selection 1, 9-11, 15 and 17-19). In the context of this software project, option 4 (Complex Drug Change) is a dressing change requiring 30 minutes or more to complete. A dressing change requiring less time is a simple dressing change (option 20).

#### IV. Nursing Personnel

Figure 2 (Prototype Master Screen) has two valid choices for nurses, 0 (Sign-Off) and 3 (Nursing Master). Option 0 returns the nurse to the introductory screen (Figure 1). Option 0 implies intent to leave the computer session.

#### Patient Selection

Selection 3 (Nursing Master) advances the nurse to Figure 5 (Nurse's Station Selection). The nurse selects the desired ward or returns to the previous screen (Figure 2).

Selection 1 (Figure 5) follows with Figure 5.1a (Patient Selection for Ward 2E). Patients assigned to Ward 2E by the admission's department appear in their room and bed assignments.

** Nurse's Station Selection **		Date	Time
*** Select Nursing Unit to Display Patients ***			
1) 2E Surgical ward			
2) 3E Medical ward			
0) Sign-Off		3) Master Screen	
Current user	Select one number (0-3) ----> .		

Figure 5

** Patient Selection **		Word	2E Surgical	Date	Time
*** Select Patient ***					
	RM	BED	PATIENT		
1)	1	A			
2)	1	B			
3)	2	A			
4)	2	B			
5)	3	A			
6)	3	B			
0) Sign-Off		7) Master Screen			
Current user:	Select one number (0-7) ----> .				

Figure 5.1a

Choosing any one of the six patients advances the user to Figure 5.1.1, the Nursing Master Screen. Word, room, bed, patient and registration number appear on the second line of each of the screens to assure proper patient identification. The identical sequence follows for selection 2, Patient Selection for Ward 3E (Figure 5.1b).

Master Screen is an option on some screens and differs slightly from the Sign-Off option. Sign-Off is the appropriate selection if the computer session is over. Master Screen allows the user to select a different patient to enter a care plan on without requiring the nurse to redo the user identification process.

### Nursing's Category Options

Figure 5.1.1 [Nursing Master Screen] is a branching screen.

ward	Room	Bed	Patient	Reg #	Date	Time
*** NURSING MASTER SCREEN ***						
1) Enter/Inactivate Nursing Care Plan			5) Review Patient Care Requirements			
2) Review Nursing Care Plan			6) Print Patient Care Requirements			
3) Print Nursing Care Plan			7) Internal Patient Classification			
4) External Patient Classification						
0) Sign-Off			8) Master Screen			
Current user			Select one number (0-8) ----> .			

Figure 5.1.1

Selection 1 advances the program to Figure 5.1.1.1 [Select The Desired Nursing Care Plan Function]. This option allows the nurse to enter or inactivate a patient's care plan.

Selection 2 and 3, on the Nursing Master Screen vary only in the location of their output. Selection 2 displays the nursing care plan on the screen. Figure 5.1.1.2, is a screen output for Review Nursing Care Plan. Selection 3 provides the same nursing care plan information on the printer. Selection 4 [External Patient Classification] requires the nurse to leave this portion of the prototype project (see Expert System Supplement).



Selection 5, of the Nursing Master Screen (Figure 5.1.1), Review Patient Care Requirements, displays all active orders on the patient. Patient Care Requirements are the total active medical and nursing care orders for a particular patient. Figure 5.1.1.3 is a screen output for Review Patient Care Requirements.

Press -- Ctrl and S -- Keys To Pause The Scrolling If Necessary  
 Page No. 1  
 01/12/86

Date	Time	Order	Frequency	Practitioner
01/11/86	10:06:20	Teach Alt Coping Strategies		G. Harmeyer RN
01/11/86	12:08:07	Assist Bed To Wheelchair	TID	N. Lyons MD
01/11/86	13:10:15	Self/Minimum Care		G. Harmeyer RN
01/11/86	13:10:53	Keep Commode @ Bedside	TID	G. Harmeyer RN
01/11/86	14:13:47	Up in Chair w/ Assist	TID	N. Lyons MD
01/11/86	14:14:23	Diabetic Diet		N. Lyons MD
01/12/86	10:17:14	Chloride	Daily @ 0600	T. Bui MD
01/12/86	10:17:40	Sodium		T. Bui MD
01/12/86	10:18:00	Amylase		T. Bui MD
01/12/86	10:18:26	Potassium	Daily @ 0600	T. Bui MD
01/12/86	10:19:56	CO2	Daily @ 0600	T. Bui MD
01/12/86	10:19:26	CBC	Daily @ 0600	T. Bui MD
01/12/86	10:19:54	Platelets	Daily @ 0600	T. Bui MD
01/12/86	10:20:18	Glucose	Daily @ 0600	T. Bui MD
01/12/86	10:22:02	Intake & Output	TID	T. Bui MD

Figure 5.1.1.3

Selection 6 provides the same information on the printer. Selection 7 (Internal Patient Classification), gives the patient classification level and point value -- Figure 5.1.1.6 (Appendix F)

---

Patient: Mary Miser  
Is In: Category II  
Point Value Is: 27

---

Figure 5.1.1.6

Nursing Diagnosis

Selection 1 on the Nursing Master Screen, advances the program to Figure 5.1.1.1 (Select The Desired Nursing Care Plan Function). The nurse has two major choices: selection 1 -- Enter New Care Plan and selection 2 -- Inactivate Portions of Care Plans. Selection 1 advances the program to Figure 5.1.1.1a (Select Nursing Diagnosis).

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT NURSING DIAGNOSIS ***				
1) Comfort, Alteration In: Pain				
2) Communication, Impaired: Verbal				
3) Impaired Physical Mobility				
4) Self-Care Deficit				
0) Sign-Off      5) Nurse's Master Screen      6) Master Screen				
Current User:		Select one number (0-6) ----> .		

Figure 5.1.1.1a

Of the 52 nursing diagnoses approved through the 5th and 6th National Conferences of the North American Nursing Diagnosis Association a representative four were chosen.

#### Patient Assessment

Following the selection of one of the diagnoses, the nurse advances to one of the four assessment screens (Figure 5.1.1.1b, 5.1.1.1k, 5.1.1.1q, 5.1.1.1y).

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT NURSING ASSESSMENTS FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **				
1) Altered Time Perception	7) Guarding Behavior	12) Self-Focusing		
2) Alteration Muscle Tone	8) Impaired Thought Process	13) Talkative		
3) Autonomic Response	9) Narrowing Focus	14) Verbal Complaint		
4) Distraction Behavior	10) Pacing	15) Vocal Complaints (Moans, Crying)		
5) Facial Mask	11) Patient Report	16) Withdrawal From Social Contact		
6) Other Assessment: [.....]				
Current User:		Select one number (01-16) --->		

Figure S.1.1.1b

Assessments, related factors, goals and nursing orders used are not an inclusive list, but rather generic options to build on. Any assessment, related factor, goal or order can be changed to better reflect the individual nature of their hospital setting. To select any number less than 10, enter either 03 or 3 <enter> to advance the program.

#### Related Factors and Patient Goals

Following the assessment selection, the program moves to the related factor associated with the diagnosis (Figure S.1.1.1c, S.1.1.11, S.1.1.1r, S.1.1.1z). The patient goal screen follows (Figure S.1.1.1d, S.1.1.1m, S.1.1.1s, S.1.1.1aa).

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A RELATED FACTOR FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **				
1) Altered Sensation		5) Surgical Procedure		
2) Disease / Condition		6) Trauma		
3) Emotional State		7) Treatment Regime		
4) Other: [.....]				
Current User:		Select one number (1-7) ---->		

Figure 5.1.1.1c

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A PATIENT GOAL FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **				
1) Communicates Pain Free				
2) Communicates Experiences Less Pain				
3) Communicates Experience of Pain More Tolerable				
4) Demos Skills & Knowledge to Achieve Pt Goals				
5) Other Goals: [.....]				
Current User:		Select one number (1-5) ---->		

Figure 5.1.1.1d

### Nursing Orders

The patient goal selected, triggers the appropriate patient order screen. If patient diagnosis selection is

comfort alteration in: pain, and the goal selected from Figure 5.1.1.1d is 1, 2, 3, or 5, Figure 5.1.1.1.e appears. To obtain additional information on some of the nursing orders, the program may advance the nurse to Select Time / Frequency Option (Figure 5.1.1.1g) with its help facility (Figure 5.1.1.1h); a teaching module (Figure 5.1.1.1i) to illicit the type of teaching necessary; or an emotional support screen to determine the type of emotional support required (Figure 5.1.1.1j). With the selection of goal 4, the program displays Figure (5.1.1.1f).

Ward Room Bed	Patient	Reg #	Date	Time										
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** COMMUNICATES: PAIN FREE, EXPERIENCES LESS/TOLERABLE PAIN OR OTHER GOAL **														
<table border="0"> <tr> <td>1) Assess Pain Factors</td> <td>6) Offer PRN Medications</td> </tr> <tr> <td>2) Assess &amp; Evaluate Pain</td> <td>7) Provide Emotional Support</td> </tr> <tr> <td>3) Encour Pt to Use Coping Strategy</td> <td>8) Schedule "Quiet Times"</td> </tr> <tr> <td>4) Give Info &amp; Explain Proc &amp; Tests</td> <td>9) Teach Alt Coping Strategies</td> </tr> <tr> <td>5) Other Nursing Orders: [.....]</td> <td>10) Utilize Diversional Activities</td> </tr> </table>					1) Assess Pain Factors	6) Offer PRN Medications	2) Assess & Evaluate Pain	7) Provide Emotional Support	3) Encour Pt to Use Coping Strategy	8) Schedule "Quiet Times"	4) Give Info & Explain Proc & Tests	9) Teach Alt Coping Strategies	5) Other Nursing Orders: [.....]	10) Utilize Diversional Activities
1) Assess Pain Factors	6) Offer PRN Medications													
2) Assess & Evaluate Pain	7) Provide Emotional Support													
3) Encour Pt to Use Coping Strategy	8) Schedule "Quiet Times"													
4) Give Info & Explain Proc & Tests	9) Teach Alt Coping Strategies													
5) Other Nursing Orders: [.....]	10) Utilize Diversional Activities													
Current User:		Select one number (01-10) ---->												

Figure 5.1.1.1e

Ward Room Bed	Patient	Reg #	Date	Time
---------------	---------	-------	------	------

\*\* SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS \*\*  
 \*\* DEMONSTRATES SKILLS & KNOWLEDGE TO ACHIEVE GOALS \*\*

• Teach Stress Reduction Techniques

- 1) Deep Breathing
- 2) Progressive Relaxation
- 3) Relaxation Response
- 4) Diversional Activity
- 5) Other: [.....]

Current User:

Select one number (1-5) ---->

Figure S.1.1.1f

Each of the four nursing diagnoses follows the same sequence: assessment, related factor, goal and nursing order with generic type responses. The only variation lies in the goal section of the Self-Care Deficit diagnosis (Figure S.1.1.1a). Levels 0 through 4 are self care levels as defined in COMPUTERIZED NURSING CARE PLANNING UTILIZING NURSING DIAGNOSIS and referenced in the main text of the thesis. Current level of care required is also asked for. Current level of care enters into the patient classification determination.

A caveat exists regarding the use of the "other order" option provided by each of the nursing order screens. Many nursing orders are directly linked to the internal processing of the patient classification system. The use of the "other order" may give a more accurate order, but will not enter points into the patient's classification level. If orders are identified that need to be added, and affect the patient classification, they should be incorporated into the program, rather than being typed in.

### Inactivate Portion of Care Plan

In addition to selection 1 on the Select Desired Nursing Care Plan Function screen (Figure S.1.1.1), the nurse can choose to inactivate a portion of the care plan by

selecting option 2. Figure 5.1.1.lag displays nursing care plan information for review and inactivation as needed.

#### U. System Administration Personnel

Access level 0 or 2 will allow the user access to the System Administration section of the program. The target user group for this section is the department responsible for issuing access levels and recording user's information. Figure 6.1 provides the format used to enter user's information.

---

\*\*\* SELECT ADD / DELETE A USER \*\*\*

---

1: Add A User

2: Delete A User

0: Sign-Off

---

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 6



---

USER INFORMATION

\*\*\* THIS INFORMATION IS CONFIDENTIAL \*\*\*

---

First Initial: .

Middle Initial:

Last Name:

Category of  
Requestor:

Password:

Access Level:

---

Figure 6.1

The User Information screen consists of 6 input areas. After inputting the information, press enter to move to the next category. The amount of information and the acceptable inputs are as follows:

First Initial:	Allows only one character to be entered, automatically capitalizes it, places a period after the letter and advances the user to the next field.
Middle Initial:	Parameters are identical to First Initial.
Last Name:	Allows entry of up to 20 letters, capitalizes the first letter and advances the user to the next field.
Category of Requestor:	A three letter field for a coded category. Could include rate, rank or educational background. Used for user information only and is not otherwise incorporated into the program.
Password:	A 5 letter or number code selected by the user to log into the system.
Access Level:	Authorizes a person to enter different sections of the software project. Five levels of access are available: 0 Unlimited access to all sections of the software project. 1 Restricted to the admission's section of the software project.

- 2 Restricted to the data base section of the software project.
- 3 Restricted to the doctor section of the software project.
- 4 Restricted to the nursing section of the software project.

### Expert System Supplement

There are two ways for the nurse to obtain a patient classification, externally or internally (selection 4 and 7 respectively on Figure 5.1.1 -- Nurse's Master Screen). Selection 4 loads a qualifier and value number for each patient order that corresponds to a critical indicator. This is the expert system information to calculate the patient classification level.

To calculate the external patient classification system choose selection 4, Figure 5.1.1. A manufacturer's sign-off message appears at the bottom of the screen indicating that you are leaving dBase III. Remove disk A:2 and insert disk A:3. Type b:expert <enter>. The expert program loads into memory the necessary information to calculate the patient classification. The program asks some preliminary questions (three) which require no response except <enter>. The expert system program gives the user an opportunity to see the rules used to arrive at the classification level.

Selection 7 of Figure 5.1.1 works in a similar manner to selection 4, without leaving the main program. Selection 7 provides a much quicker patient classification level, but is not able to provide the user with the information on how the classification was derived.

During the programming phase of this project, medical orders that corresponded to critical indicators were tied to their corresponding medical order, ie. vital signs QD receives a patient point value of 1, apnea monitor receives a monitor point value of 6. The reason vital signs has a patient point value and apnea monitor has a monitor point value is because the vital sign's critical indicator relates directly to critical indicator points. This is not true of an order for an apnea, cardiac or pressure monitor. In the latter case the patient point total would remain at 6 even if three monitors were ordered. Where point totals are not additive or do not directly translate to patient points -- the cardiac, apnea, temp and pressure monitors;

S&A, SpGr, Guiac and spin HCT; and emotional support -- special point totals are calculated prior to their translation to a patient point totals.

Listed in Appendix F are qualifiers and their values used to derive the expert system's rules. Through the use of 382 rules, the patient classification level is derived.

## APPENDIX B

### PATIENT CLASSIFICATION CRITICAL INDICATORS

VITAL SIGNS (MANUAL TPB, BP)	
(1) Vital signs QID or less	(2) Rectal or axillary temps or apical pulse QID or more
(2) Vital signs q4h or x 8	(2) Femoral or pedal pulses or FHT q4h or more
(4) Vital signs q2h or x 12	(2) Tilt tests q4h or more
(8) Vital signs q1h or x 24	(8) Post-op, post-partum or post-newborn
MONITORING	
(2) Intake and output q8h or x 3	(6) Cardiac/apnoeas/pressure monitors (not additive)
(8) Intake and output q2h or x 12	(8) Transcutaneous monitor
(2) Circulation or fundus checks q2h or x 12	(4) A-line or ICP (monitor) or Swan Ganz set-up
(3) Neuro checks q4h or x 8	(2) A-line or ICP (monitor) reading q2h or x 12
(8) Neuro checks q2h or x 12	(2) PAP/PA wedge reading q4h or x 8
(2) CVP or ICP (manual) q2h or x 12	(4) PAP/PA wedge reading q2h or x 12
	(2) Cardiac output TID or x 3
ACTIVITIES OF DAILY LIVING	
(6) Infant/toddler care (< 5 years)	(32) Total care (> 5 years) - position and skin care q2h
(2) Self/minimal care (adult or child > 5 years)	(4) Extra linen change and partial bath 2x per shift
(8) Assisted care (> 5 years) - position self	(14) Turning frame (2 staff to turn q2h)
(14) Complete care (> 5 years) assist with positioning	(8) Peds recreation/observation - 8-12 yrs (exclude NBN)
FEEDING	
(2) Tube feeding (continuous) - per bag change	(2) Infant/neonate bottle x 1 feeding
(5) Tube feed (bolus) adult/child/neonate q4h or x 8	(12) Infant/neonate bottle q4h or x 8
(8) Adult meals > 5 years (spoon feed x 3)	(24) Infant/neonate bottle q2h or x 12
(10) Child meals < 5 years (spoon feed x 3)	
TREATMENTS/PROCEDURES/MEDICATIONS	
Simple > 15 and < 30 Minutes Total	Complex > 30 minutes and < 1 Hour Total
(2) Start IV or NG insertion or Foley insertion or EKG	(4) Chest tube insertion or lumbar puncture
(2) Surgical prep or enemas or ace wraps/elastic stockings	(4) Thoracentesis or paracentesis
(2) Simple dressing x 2, or tube care x 2 (exclude trach, Foley care x 2)	(4) Complex dressing change (> 30 minutes to complete)
(2) S&A or SpGr or Guise or spin HCT x 8	(4) Straight catheterization x 4 or more
(2) Lab studies x 8: ABG stick or blood culture x 3	(4) Medications q2h or more (exclude IV) (> 12 trips)
(2) Medications q3h - q8h (exclude IV) - (up to 12 trips)	(4) Range of motion exercises x 3
(2) Irrigations or instillations x 4 or less	(4) Accompany patient off ward > 30 minutes
(2) Restraints (2 or 4 point or prony)	(4) Other activities requiring > 30 minutes and < 1 hour
(2) Assist to chair or stretcher and return x 3	(4) Transfer (in-house) - assess & orient
(2) Assist to walk and return x 1	(12) New admission - assess & orient
(2) Infant circumcision or phototherapy	
(2) Isolation (gown & glove x 8)	Special Procedures > 1 Hour < 4 Hours
(2) Accompany patient off ward > 15 minutes & < 30 minutes	(8) Each complete hour requiring continuous staff attendance
(2) Other activities requiring > 15 minutes & < 30 minutes	
RESPIRATORY THERAPY	
(2) Oxygen therapy or oxyhood	(2) Chest pulmonary therapy BID or x 2
(2) Incentive spirometer or C&DB q4h	(4) Chest pulmonary therapy q6h or x 4
(2) IPPB or maximist BID or x 2	(8) Chest pulmonary therapy q4h or x 8
(4) IPPB or maximist q8h or x 4	(2) Suctioning q4h or x 8
(6) IPPB or maximist q4h or x 8	(4) Suctioning q2h or x 12
(8) Croup tent or mist tent	(4) Tracheostomy care x 3
	(10) Ventilator
IV THERAPY	
(4) KVO (change bottle BID or less)	(2) Medication q8h or x 3
(4) Heparin lock or Brolvic	(3) Medication q6h or x 4
(8) Simple (change bottle TID or QID)	(4) Medication q4h or x 8
(8) Complex (two or more sites or change bottle q4h or multilumen line)	(2) Blood products (each unit)
TEACHING AND EMOTIONAL SUPPORT	
(Must be documented)	
Teaching	Emotional Support (in excess of 30 minutes q 24 hours)
(2) Group teaching	(4) Patient/family support (i.e. anxiety, denial, loneliness, etc.)
(4) Preoperative teaching	(4) Modification lifestyle (i.e. new prosthesis, body image, behavior modification, etc.)
(4) Structured teaching (i.e. diabetic, cardiac, colostomy care, post partum first 24 hrs, newborn care, discharge)	(8) Sensory deprivation (i.e. retarded, deaf, blind, language barrier, bilateral eye patches, confused, combative, etc.)
	(10) Maximum points for emotional support
CONTINUOUS	
(98) Patient requiring 1:1 coverage all shifts (i.e. peritoneal dialysis, combative, etc.)	
(146) Patient requiring greater than 1:1 coverage all shifts (i.e. ventilator with multiple vasopressors, IABP, etc.)	

Dec 1984

THE NAVY MEDICAL DEPARTMENT'S WORKLOAD MANAGEMENT  
SYSTEM FOR NURSING, May, 1985, P. 10.

## QUALIFIERS

### 1. Vital signs order is:

QID or less  
q4h or x 6  
q2h or x 12  
q1h or x 24  
Not ordered

Used in rules: 1-5

### 2. Rectal or axillary temp order is:

Rectal temps less than QID  
Axillary temps less than QID  
Rectal temps QID or more  
Axillary temps QID or more  
Not ordered

Used in rules: 6-10

### 3. Patient order for apical pulse is:

Apical pulse less than QID  
Apical pulse QID or more  
Not ordered

Used in rules: 11-13

### 4. Patient order for femoral pulse is:

Femoral pulses are less than q4h  
Femoral pulses q4h or more  
Not ordered

Used in rules: 14-16

### 5. Patient order for pedal pulse is:

Pedal pulses less than q4h  
Pedal pulses q4h or more  
Not ordered

Used in rules: 17-19

6. Patient order for FHT is:

FHT less than q4h  
FHT q4h or more  
Not ordered

Used in rules: 20-22

7. Patient order for tilt test is:

Tilt test less than q4h  
Tilt test q4h or more  
Not ordered

Used in rules: 23-25

8. Patient order for postop/post partum/post-newborn vital signs is:

Post op vital signs  
Post-partum vital signs  
Post-newborn vital signs  
Not ordered

Used in rules: 26-29

9. Patient order for intake & output is:

Intake & output less than q8h or x 3  
Intake & output at least q8h [x 3] but less than q4h  
[x6]  
Intake & output q4h or x 6  
Intake & output q2h or x 12  
Intake & output q1h or x 24  
Not ordered

Used in rules: 30-35

10. Patient order for circulation checks is:

Circulation checks less than q2h or x 12  
Circulation checks q2h or x 12  
Circulation checks q1h or x 24  
Not ordered

Used in rules: 36-39

AD-A169 129

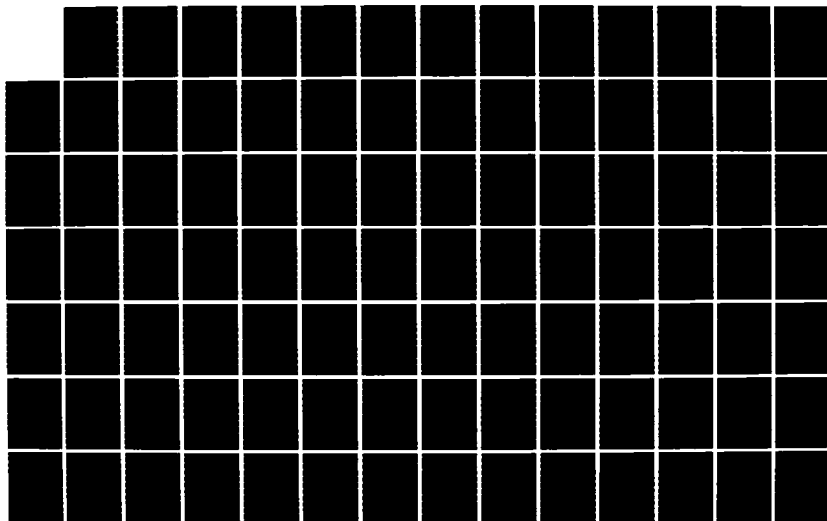
A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION(U) NAVAL  
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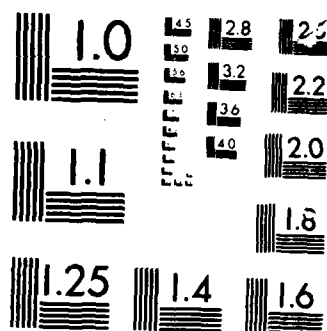
2/3

UNCLASSIFIED

F/G 5/1

NL







11. Patient orders for neuro checks is:

Neuro checks less than q4h or x 6  
Neuro checks q4h or x 6  
Neuro checks q2h or x 12  
Neuro checks q1h or x 24  
Not ordered

Used in rules: 40-44

12. Patient order for CVP manual readings is:

CVP manual readings less than q2h or x 12  
CVP manual readings q2h or x 12  
CVP manual readings q1h or x 24  
Not ordered

Used in rules: 45-48

13. Patient order for ICP manual readings is:

ICP manual readings less than q2h or x 12  
ICP manual readings q2h or x 12  
ICP manual readings q1h or x 24  
Not ordered

Used in rules: 49-52

14. Patient order for fundus checks is

Fundus checks less than q2h or x 12  
Fundus checks q2h or x 12  
Fundus checks q1h or x 24  
Not ordered

Used in rules: 53-56

15. Patient order for transcutaneous monitor is:

Transcutaneous monitor  
Not ordered

Used in rules: 57, 58

16. Patient order for an A-line set-up is

A-line set-up  
Not ordered

Used in rules: 59, 60

17. Patient order for an ICP monitor set-up is:

ICP monitor set-up  
Not ordered

Used in rules: 61, 62

18. Patient order for Swan-Gantz set-up is:

Swan Ganz set-up  
Not ordered

Used in rules: 63, 64

19. Patient order for A-line reading is:

A-line reading less than q2h or x 12  
A-line reading q2h or x 12  
A-line reading q1h or x 24  
Not ordered

Used in rules: 65-68

20. Patient order for ICP monitor reading is:

ICP monitor reading less than q2h or x 12  
ICP monitor reading q2h or x 12  
ICP monitor reading q1h or x 24  
Not ordered

Used in rules: 69-72

21. Patient order for PAP/PA wedge reading is:

PAP/PA wedge reading of less than q4h or x 6  
PAP/PA wedge reading q4h or x 6  
PAP/PA wedge reading q2h or x 12  
PAP/PA wedge reading q1h or x 24  
Not ordered

Used in rules: 73-77

22. Patient order for cardiac output is:

Cardiac output less than IID or x 3  
Cardiac output less than IID (x 3) but less than q4h  
(x 6)  
Cardiac output q4h or x 6  
Cardiac output q2h or x 12

Cardiac output q1h or x 24  
Not ordered

Used in rules: 78-83

23. Patient order for ADL is:

Infant/toddler care ( < 5 years)  
Self/minimal care (adult or child > 5 years)  
Assisted care (> 5 years) positions self  
Complete care (> 5 years) assist with positioning  
Total care (> 5 years) position and skin care q2h

Used in rules: 84-88

24. Patient order for extra linen change and partial bath  
is:

Extra linen change and partial bath less than 2x per  
shift  
Extra linen change and partial bath 2x per shift (or 6x  
per day)  
Extra linen change and partial bath 4x per shift (or 12x  
per day)  
Extra linen change and partial bath 8x per shift (or 24x  
per day)  
Not ordered

Used in rules: 89-93

25. Patient order for turning frame is:

Turning frame less than q2h  
Turning frame q2h or x 12  
Turning frame q1h or x 24  
Not ordered

Used in rules: 94-97

26. Patient order for peds recreation/observation is:

Peds recreation/observation - 0-12 yrs (exc NBN)  
Not ordered

Used in rules: 98, 99

27. Patient order for tube feedings is:

Tube feedings continuous -- less than 1 bag per 24 hours  
Tube feedings continuous -- 1 bag per 24 hours

Tube feedings continuous -- 2 bag per 24 hours  
Tube feedings continuous -- 3 bag per 24 hours  
Tube feedings continuous -- 4 bag per 24 hours  
Tube feedings continuous -- 6 bag per 24 hours  
Tube feedings continuous -- 12 bag per 24 hours  
Tube feedings continuous -- 24 bag per 24 hours  
Tube feedings (bolus) less than q4h or x 6  
Tube feedings (bolus) q4h or x 6  
Tube feedings (bolus) q2h or x 12  
Tube feedings (bolus) q1h or x 24  
Not ordered

Used in rules: 100-112

28. Patient order for spoon feeding is:

Adult meals > 5 (spoon feed x 3)  
Child meals <= 5 years (spoon feed x 3)  
Not ordered

Used in rules: 113-115

29. Patient order for infant/neonate bottled feeding is:

Infant/neonate bottle x 1 feeding  
Infant/neonate bottle q4h or x 6  
Infant/neonate bottle q2h or x 12  
Not ordered

Used in rules: 116-119

30. Patient order for IV insertion is:

IV insertion  
Not ordered

Used in rules: 120, 121

31. Patient order for NG insertion is:

NG insertion  
Not ordered

Used in rules: 122, 123

32. Patient order for foley insertion / straight catheterization is:

Foley insertion  
Straight catheterization of less than 4

Straight catheterization of 4 or more  
Not ordered

Used in rules: 124-127

33. Patient order for EKG strip is:

EKG rhythm strip  
Not ordered

Used in rules: 128, 129

34. Patient order for surgical prep is:

Surgical prep  
Not ordered

Used in rules: 130, 131

35. Patient order for enemas is:

Enemas  
Not ordered

Used in rules: 132, 133

36. Patient order for ace wrap/elastic stockings is:

Ace wrap  
Elastic stockings  
Not ordered

Used in rules: 134-136

37. Patient order for dressings change is:

Simple dressing change less than x 2 or BID  
Simple dressing change x 2 or BID  
Simple dressing change x 3 or TID  
Simple dressing change x 4 or QID  
Simple dressing change x 6 or q4h  
Simple dressing change x 12 or q2h  
Simple dressing change x 24 or q1h  
Complex dressing change x 1 or QD  
Complex dressing change x 2 or BID  
Complex dressing change x 3 or TID  
Complex dressing change x 4 or QID  
Complex dressing change x 6 or q4h  
Complex dressing change x 12 or q2h

Complex dressing change x 24 or q1h  
Not ordered

Used in rules: 137-151

38. Patient order for tube care [excluding trach] is:

Tube care less than x 2 or BID  
Tube care x 2 or BID  
Tube care x 3 or TID  
Tube care x 4 or QID  
Tube care x 6 or q4h  
Tube care x 12 or q2h  
Tube care x 24 or q1h  
Not ordered

Used in rules: 152-159

39. Patient order for Foley care is:

Foley care less than x 2 or BID  
Foley care x 2 or BID  
Foley care x 3 or TID  
Foley care x 4 or QID  
Foley care x 6 or q4h  
Foley care x 12 or q2h  
Foley care x 24 or q1h  
Not ordered

Used in rules: 160-167

40. Patient order for S & S is:

S & A x 1 or QD  
S & A x 2 or BID  
S & A x 3 or TID  
S & A x 4 or QID  
S & A x 6 or q4h  
S & A x 12 or q2h  
S & A x 24 or q1h  
Not ordered

Used in rules: 168-175

41. Patient order for SpGr is:

SpGr x 1 or QD  
SpGr x 2 or BID  
SpGr x 3 or TID  
SpGr x 4 or QID

SpGr x 6 or q4h  
SpGr x 12 or q2h  
SpGr x 24 or q1h  
Not ordered

Used in rules: 176-183

42. Patient order for Guaiac is:

Guaiac stools x 1 or QD  
Guaiac stools x 2 or BID  
Guaiac stools x 3 or TID  
Guaiac stools x 4 or QID  
Guaiac stools x 6 or q4h  
Guaiac stools x 12 or q2h  
Guaiac stools x 24 or q1h  
Not ordered

Used in rules: 184-191

43. Patient order for spin HCT is:

Spin HCT x 1 or QD  
Spin HCT x 2 or BID  
Spin HCT x 3 or TID  
Spin HCT x 4 or QID  
Spin HCT x 6 or q4h  
Spin HCT x 12 or q2h  
Spin HCT x 24 or q1h  
Not ordered

Used in rules: 192-199

44. Patient order for lab studies is:

Lab studies less than x 6  
Lab studies x 6 or q4h  
Lab studies x 12 or q2h  
Lab studies x 24 or q1h  
Not ordered

Used in rules: 200-204

45. Patient order for ABG stick is:

ABG sticks, less than 3  
ABG sticks, at least 3 but less than 6  
ABG sticks x 6  
ABG sticks x 12

ABG sticks x 24  
Not ordered

Used in rules: 205-210

46. Patient order for blood cultures is:

Blood cultures less than x 3  
Blood cultures at least x 3 but less than x 6  
Blood cultures x 6  
Blood cultures x 12  
Blood cultures x 24  
Not ordered

Used in rules: 211-216

47. Patient order for medications is:

Medications less than q8h [excluding IV]  
Medications q3h - q8h [excluding IV] - up to 12 trips  
Medications q2h or more [excluding IV] - > 12 trips  
Not ordered

Used in rules: 217-220

48. Patient order for irrigations is:

Irrigation x 4 (QID) or less  
Irrigation x 6 or q4h  
Irrigation x 12 or q2h  
Irrigation x 24 or q1h  
Not ordered

Used in rules: 221-225

49. Patient order for instillations is:

Instillations x 4 (QID) or less  
Instillations x 6 or q4h  
Instillations x 12 or q2h  
Instillations x 24 or q1h  
Not ordered

Used in rules: 226-230

50. Patient order for restraints is:

2-point  
4-point



Posay  
Not ordered

Used in rules: 231-234

51. Patient order of assist to chair / stretcher is:

Assist to chair and return less than x 3 or IID  
Assist to stretcher and return less than x 3 or IID  
Assist to stretcher at least x 3 but less than x 6  
Assist to stretcher x 6 or q4h  
Assist to stretcher x 12 or q2h  
Assist to stretcher x 24 or q1h  
Assist to chair at least x 3 but less than x 6  
Assist to chair x 6 or q4h  
Assist to chair x 12 or q2h  
Assist to chair x 24 or q1h  
Ambulate with assistance x 1  
Ambulate with assistance x 2  
Ambulate with assistance x 3  
Ambulate with assistance x 4  
Ambulate with assistance x 6  
Ambulate with assistance x 12  
Ambulate with assistance x 24  
Not ordered

Used in rules: 236-252

52. Patient order for infant circumcision care is:

Infant circumcision care  
Not ordered

Used in rules: 253, 254

53. Patient order for phototherapy is:

Phototherapy  
Not ordered

Used in rules: 255, 256

54. Patient order for isolation is:

Isolation [change gown and gloves < x 8]  
Isolation [change gown and gloves x 8 or more]  
Not ordered

Used in rules: 257-259

55. Patient order for accompany patient off ward is:

Accompany patient off ward for less than 15 min  
Accompany patient off ward for 15 to 30 min  
Accompany patient off ward for greater than 30 min  
Not ordered

Used in rules: 260-263

56. Patient order for other activities is:

Other activities requiring less than 15 minutes  
Other activities requiring 15 to 30 minutes  
Other activities requiring 30 min to 1 hr  
Special procedures > 1hr < 2 hr (requiring continuous  
staff attendance)  
Not ordered

Used in rules: 264-268

57. Patient order for chest tube insertion is:

Chest tube insertion  
Not ordered

Used in rules: 269, 270

58. Patient order for lumbar puncture is:

Lumbar puncture  
Not ordered

Used in rules: 271, 272

59. Patient order for thoracentesis is:

Thoracentesis  
Not ordered

Used in rules: 273, 274

60. Patient order for paracentesis is:

Paracentesis  
Not ordered

Used in rules: 275, 276

61. Patient order for range of motion is:

Range of motion exercises less than x 3 or TID  
Range of motion exercises at least x 3 but less than x 6  
Range of motion exercises x 6 or q4h  
Range of motion exercises x 12 or q2h  
Range of motion exercises x 24 or q1h  
Not ordered

Used in rules: 277-282

62. Patient order to transfer in-house or new admission is:

Transfer in-house (assess and orient)  
New admission (assess and orient)  
Not ordered

Used in rules: 283-285

63. Patient order for O2 therapy or oxyhood is:

Oxygen therapy  
Oxyhood  
Not ordered

Used in rules: 286-288

64. Patient order for incentive spirometer is:

Incentive spirometer less than q4h  
Incentive spirometer q4h  
Incentive spirometer q2h  
Incentive spirometer q1h  
Not ordered

Used in rules: 289-293

65. Patient order for C&DB is:

C & DB less than q4h  
C & DB q4h  
C & DB q2h  
C & DB q1h  
Not ordered

Used in rules: 294-298

66. Patient order for IPPB or maximist is:

IPPB or maximist less than BID or x 2

IPPB or maximist BID or x 2  
IPPB or maximist TID or x 3  
IPPB or maximist q6h, x 4 or QID  
IPPB or maximist q4h, x 6  
IPPB or maximist q2h, x 12  
IPPB or maximist q1h, x 24  
Not ordered

Used in rules: 299-306

67. Patient order for croup tent or mist tent is:

Croup tent  
Mist tent  
Not ordered

Used in rules: 307-309

68. Patient order for chest pulmonary therapy is:

Chest pulmonary therapy less than BID or x 2  
Chest pulmonary therapy BID or x 2  
Chest pulmonary therapy TID or x 3  
Chest pulmonary therapy QID or x 4  
Chest pulmonary therapy q4h or x 6  
Chest pulmonary therapy q2h or x 12  
Chest pulmonary therapy q1h or x 24  
Not ordered

Used in rules: 310-317

69. Patient order for suctioning is:

Suctioning less than q4h or x 6  
Suctioning q4h or x 6  
Suctioning q2h or x 12  
Suctioning q1h or x 24  
Not ordered

Used in rules: 318-322

70. Patient order for trach care is:

Trach care < x 3 or less than TID  
Trach care at least TID (x 3) but less than q4h (x 6)  
Trach care x 6 or q4h  
Trach care x 12 or q2h  
Trach care x 24 or q1h  
Not ordered

Used in rules: 323-328

71. Patient order for ventilator is:

Ventilator  
Not ordered

Used in rules: 329, 330

72. Patient order for hanging IV bottles is:

KVO (change bottle BID or less)  
Simple (change bottle TID or QID)  
Complex (change bottle q4h or more, two or more sites,  
or multilumen tube)  
Not ordered

Used in rules: 331-334

73. Patient order for heparin lock or Broviac catheter is:

Heparin lock  
Broviac catheter  
Not ordered

Used in rules: 335-337

74. Patient order for IV medication is:

IV medication of less than q8h or x 3  
IV medication q8h or x 3  
IV medication q6h or x 4  
IV medication q4h or x 6  
IV medication q2h or x 12  
IV medication q1h or x 24  
Not ordered

Used for rules: 338-344

75. Patient order for blood products is:

Blood products x 1 unit  
Blood products x 2 unit  
Blood products x 3 unit  
Blood products x 4 unit  
Blood products x 6 unit  
Blood products x 12 unit  
Blood products x 24 unit  
Not ordered

Used in rules: 345-352

76. Patient order for group teaching is:

Group teaching  
Not ordered

Used in rules: 353, 354

77. Patient order for preoperative teaching is:

Preoperative teaching  
Not ordered

Used in rules: 355, 356

78. Patient order for structured teaching is:

Structured teaching (i.e. diabetic, cardiac, colostomy  
care, post partum first 24 hr, newborn care,  
discharge)  
Not ordered

Used in rules: 357, 358

79. Patient order for emotional support is:

Patient/family support (i.e. anxiety, denial, loneliness)  
Not ordered

Used in rules: 359, 360

80. Patient order for modification of lifestyle is:

Emotional support for modification of lifestyle (i.e.  
new prothesis, body image, behavior modification)  
Not ordered

Used in rules: 361, 362

81. Patient order for sensory deprivation is:

Emotional support for sensory deprivation (i.e.  
retarded, blind, deaf, language barrier, bilateral  
eye patches, confused, combative, etc.)  
Not ordered

Used in rules: 363, 364

82. Patient order for cardiac monitor is:

Cardiac monitor  
Not ordered

Used in rules: 365, 366

83. Patient order for apnea monitor is:

Apnea monitor  
Not ordered

Used in rules: 367, 368

84. Patient order for temp monitor is:

Temp monitor  
Not ordered

Used in rules: 369, 370

85. Patient order for pressure monitor is:

Pressure monitor  
Not ordered

Used in rules: 371, 372

86. Patient category is:

I Self Care/Minimal Care  
II Moderate Care  
III Acute Care (1 staff to 3 patients)  
IV Intensive Care (1 staff to 2 patients)  
V Continuous Care (1 staff to 1 patient)  
VI Critical Care (1 staff to 1 patient)

Used in rules: 377-382

## RULES

Rule Number: 1

IF: Vital signs order is: QID or less

THEN: [ptpoint] is given the value [ptpoint] + 1

Rule Number: 2

IF: Vital signs order is: q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 3

IF: Vital signs order is: q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 4

IF: Vital signs order is: q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 5

IF: Vital signs order is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 6

IF: Rectal or axillary temp order is: Rectal temps  
less than QID

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 7

IF: Rectal or axillary temp order is: Axillary temps  
less than QID

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 8

IF: Rectal or axillary temp order is: Rectal temps  
QID or more

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 9

IF: Rectal or axillary temp order is: Axillary temps  
QID or more

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 10

IF: Rectal or axillary temp order is: Not ordered

THEN: [ptpoint] is given the value: no points awarded



Rule Number: 11  
IF: Patient order for apical pulse is: Apical pulse less than QID  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 12  
IF: Patient order for apical pulse is: Apical pulse QID or more  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 13  
IF: Patient order for apical pulse is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 14  
IF: Patient order for femoral pulse is: Femoral pulses less than q4h  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 15  
IF: Patient order for femoral pulse is: Femoral pulses q4h or more  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 16  
IF: Patient order for femoral pulse is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 17  
IF: Patient order for pedal pulses is: Pedal pulses less than q4h  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 18  
IF: Patient order for pedal pulses is: Pedal pulses q4h or more  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 19  
IF: Patient order for pedal pulses is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 20  
IF: Patient order for FHT is: FHT less than q4h  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 21  
IF: Patient order for FHT is: FHT q4h or more  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 22

IF: Patient order for FHT is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 23

IF: Patient order for tilt test is: Tilt test less than q4h

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 24

IF: Patient order for tilt test is: Tilt test q4h or more

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 25

IF: Patient order for tilt test is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 26

IF: Patient order for post-op/post-partum/post-newborn vital signs is: Post-op

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 27

IF: Patient order for post-op/post-partum/post-newborn vital signs is: Post-partum

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 28

IF: Patient order for post-op/post-partum/post-newborn vital signs is: Post-newborn

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 29

IF: Patient order for post-op/post-partum/post-newborn vital signs is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 30

IF: Patient order for intake & output is: Intake & output less than q8h or x 3

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 31

IF: Patient order for intake & output is: Intake & output at least q8h (x 3), but less than q4h (x 6)

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 32

IF: Patient order for intake & output is: Intake & output q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 33

IF: Patient order for intake & output is: Intake & output q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 34

IF: Patient order for intake & output is: Intake & output q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 35

IF: Patient order for intake & output is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 36

IF: Patient order for circulation checks is: Circulation checks less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 37

IF: Patient order for circulation checks is: Circulation checks q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 38

IF: Patient order for circulation checks is: Circulation checks q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 39

IF: Patient order for circulation checks is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 40

IF: Patient order for neuro checks is: Neuro checks less than q4h or x 6

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 41

IF: Patient order for neuro checks is: Neuro checks q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 42

IF: Patient order for neuro checks is: Neuro checks  
q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 43

IF: Patient order for neuro checks is: Neuro checks  
q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 44

IF: Patient order for neuro checks is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 45

IF: Patient order for CUP manual readings is: CUP manual  
readings less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 46

IF: Patient order for CUP manual readings is: CUP manual  
readings q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 47

IF: Patient order for CUP manual readings is: CUP manual  
readings q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 48

IF: Patient order for CUP manual readings is: Not  
ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 49

IF: Patient order for ICP manual readings is: ICP manual  
readings less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 50

IF: Patient order for ICP manual readings is: ICP manual  
readings q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 51

IF: Patient order for ICP manual readings is: ICP manual  
readings q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 52

IF: Patient order for ICP manual readings is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 53

IF: Patient order for fundus checks is: Fundus checks less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 54

IF: Patient order for fundus checks is: Fundus checks q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 55

IF: Patient order for fundus checks is: Fundus checks q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 56

IF: Patient order for fundus checks is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 57

IF: Patient order for transcutaneous monitor is: transcutaneous monitor

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 58

IF: Patient order for transcutaneous monitor is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 59

IF: Patient order for an A-line set-up is: A-line set-up

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 60

IF: Patient order for an A-line set-up is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 61

IF: Patient order for an ICP monitor set-up is: ICP monitor set-up

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 62

IF: Patient order for an ICP monitor set-up is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 63

IF: Patient order for Swan Ganz set-up is: Swan Ganz set-up

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 64

IF: Patient order for Swan Ganz set-up is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 65

IF: Patient order for A-line reading is: A-line reading less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 66

IF: Patient order for A-line reading is: A-line reading q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 67

IF: Patient order for A-line reading is: A-line reading q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 68

IF: Patient order for A-line reading is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 69

IF: Patient order for ICP monitor reading is: ICP monitor reading less than q2h or x 12

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 70

IF: Patient order for ICP monitor reading is: ICP monitor reading q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 71

IF: Patient order for ICP monitor reading is: ICP monitor reading q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 72

IF: Patient order for ICP monitor reading is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 73

IF: Patient order for PAP/PA wedge reading is: PAP/PA wedge reading of less than q4h or x 6

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 74

IF: Patient order for PAP/PA wedge reading is: PAP/PA wedge reading of q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 75

IF: Patient order for PAP/PA wedge reading is: PAP/PA wedge reading of q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 76

IF: Patient order for PAP/PA wedge reading is: PAP/PA wedge reading of q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 77

IF: Patient order for PAP/PA wedge reading is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 78

IF: Patient order for cardiac output is: Cardiac output less than TID or x 3

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 79

IF: Patient order for cardiac output is: Cardiac output at least TID (x 3) but less than q4h (x 6)

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 80

IF: Patient order for cardiac output is: Cardiac output q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 81

IF: Patient order for cardiac output is: Cardiac output q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 82

IF: Patient order for cardiac output is: Cardiac output  
q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 83

IF: Patient order for cardiac output is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 84

IF: Patient order for ADL is: Infant/toddler care  
[-< 5 years]

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 85

IF: Patient order for ADL is: Self/minimal care (adult  
or child > 5 years)

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 86

IF: Patient order for ADL is: Assisted care (> 5 years)  
positions self

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 87

IF: Patient order for ADL is: Complete care (> 5 years)  
assists with positioning

THEN: [ptpoint] is given the value [ptpoint] + 14

Rule Number: 88

IF: Patient order for ADL is: Total care (> 5 years)  
position and skin care q2h

THEN: [ptpoint] is given the value [ptpoint] + 32

Rule Number: 89

IF: Patient order for extra linen change and partial  
bath is: Extra linen and partial bath less than 2x  
per shift

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 90

IF: Patient order for extra linen change and partial  
bath is: Extra linen and partial bath 2x per shift

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 91

IF: Patient order for extra linen change and partial  
bath is: Extra linen and partial bath 4x per shift

THEN: [ptpoint] is given the value [ptpoint] + 8



Rule Number: 92

IF: Patient order for extra linen change and partial  
bath is: Extra linen and partial bath 8x per shift  
THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 93

IF: Patient order for extra linen change and partial  
bath is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 94

IF: Patient order for turning frame is: Turning frame  
less than q2h  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 95

IF: Patient order for turning frame is: Turning frame  
q2h or x 12  
THEN: [ptpoint] is given the value [ptpoint] + 14

Rule Number: 96

IF: Patient order for turning frame is: Turning frame  
q1h or x 24  
THEN: [ptpoint] is given the value [ptpoint] + 28

Rule Number: 97

IF: Patient order for turning frame is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 98

IF: Patient order for peds recreation/observation is:  
Peds recreation/observation - 0-12 yrs (exc NBN)  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 99

IF: Patient order for peds recreation/observation is:  
Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 100

IF: Patient order for tube feedings is: Tube feedings  
continuous -- less than 1 bag per 24 hours  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 101

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 1 bag per 24 hours  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 102

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 2 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 103

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 3 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 104

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 4 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 105

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 6 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 106

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 12 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 107

IF: Patient order for tube feedings is: Tube feedings  
continuous -- 24 bag per 24 hours

THEN: [ptpoint] is given the value [ptpoint] + 48

Rule Number: 108

IF: Patient order for tube feedings is: Tube feedings  
[bolus] less than q4h or x 6

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 109

IF: Patient order for tube feedings is: Tube feedings  
[bolus] q4h or x 6

THEN: [ptpoint] is given the value [ptpoint] + 5

Rule Number: 110

IF: Patient order for tube feedings is: Tube feedings  
[bolus] q2h or x 12

THEN: [ptpoint] is given the value [ptpoint] + 10

Rule Number: 111

IF: Patient order for tube feedings is: Tube feedings  
[bolus] q1h or x 24

THEN: [ptpoint] is given the value [ptpoint] + 20

Rule Number: 112

IF: Patient order for tube feedings is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 113

IF: Patient order for spoon feedings is: Adult meals  
> 5 years [spoon feed x 3]  
THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 114

IF: Patient order for spoon feedings is: Child meals  
=< 5 years [spoon feed x 3]  
THEN: [ptpoint] is given the value [ptpoint] + 10

Rule Number: 115

IF: Patient order for spoon feedings is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 116

IF: Patient order for infant/neonate bottle feeding is:  
Infant/neonate bottle x 1 feeding  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 117

IF: Patient order for infant/neonate bottle feeding is:  
Infant/neonate bottle q4h or x 6  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 118

IF: Patient order for infant/neonate bottle feeding is:  
Infant/neonate bottle q2h or x 12  
THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 119

IF: Patient order for infant/neonate bottle feeding is:  
Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 120

IF: Patient order for IV insertion is: IV insertion  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 121

IF: Patient order for IV insertion is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 122

IF: Patient order for NG insertion is: NG insertion  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 123

IF: Patient order for NG insertion is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 124

IF: Patient order for foley insertion/straight  
catheterization is: Foley insertion

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 125

IF: Patient order for foley insertion/straight  
catheterization is: straight catheterizat of less  
than 3

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 126

IF: Patient order for foley insertion/straight  
catheterization is: straight catheterizat of 4 or  
more

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 127

IF: Patient order for foley insertion/straight  
catheterization is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 128

IF: Patient order for EKG rhythm strip is: EKG rhythm  
strip

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 129

IF: Patient order for EKG rhythm strip is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 130

IF: Patient order for surgical prep is: Surgical prep

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 131

IF: Patient order for surgical prep is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 132

IF: Patient order for enemas is: Enemas

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 133

IF: Patient order for enemas is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 134

IF: Patient order for ace wrap/elastic stockings is: Ace wrap

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 135

IF: Patient order for ace wrap/elastic stockings is: Elastic stockings

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 136

IF: Patient order for ace wrap/elastic stockings is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 137

IF: Patient order for dressing change is: Simple dressing change less than x 2 or BID

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 138

IF: Patient order for dressing change is: Simple dressing change x 2 or BID

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 139

IF: Patient order for dressing change is: Simple dressing change x 3 or TID

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 140

IF: Patient order for dressing change is: Simple dressing change x 4 or QID

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 141

IF: Patient order for dressing change is: Simple dressing change x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 142

IF: Patient order for dressing change is: Simple dressing change x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 143

IF: Patient order for dressing change is: Simple dressing change x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 144

IF: Patient order for dressing change is: Complex  
dressing change x 1

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 145

IF: Patient order for dressing change is: Complex  
dressing change x 2 or q12h

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 146

IF: Patient order for dressing change is: Complex  
dressing change x 3 or TID

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 147

IF: Patient order for dressing change is: Complex  
dressing change x 4 or QID

THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 148

IF: Patient order for dressing change is: Complex  
dressing change x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 149

IF: Patient order for dressing change is: Complex  
dressing change x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 48

Rule Number: 150

IF: Patient order for dressing change is: Complex  
dressing change x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 96

Rule Number: 151

IF: Patient order for dressing change is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 152

IF: Patient order for tube care (not trach) is: Tube  
care less than x 2 or BID

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 153

IF: Patient order for tube care (not trach) is: Tube  
care x 2 or BID

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 154

IF: Patient order for tube care (not trach) is: Tube care x 3 or TID

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 155

IF: Patient order for tube care (not trach) is: Tube care x 4 or QID

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 156

IF: Patient order for tube care (not trach) is: Tube care x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 157

IF: Patient order for tube care (not trach) is: Tube care x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 158

IF: Patient order for tube care (not trach) is: Tube care x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 159

IF: Patient order for tube care (not trach) is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 160

IF: Patient order for Foley care is: Foley care less than x 2 or BID

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 161

IF: Patient order for Foley care is: Foley care x 2 or BID

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 162

IF: Patient order for Foley care is: Foley care x 3 or TID

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 163

IF: Patient order for Foley care is: Foley care x 4 or QID

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 164

IF: Patient order for Foley care is: Foley care x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 165

IF: Patient order for Foley care is: Foley care x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 166

IF: Patient order for Foley care is: Foley care x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 167

IF: Patient order for Foley care is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 168

IF: Patient order for S & A is: S & A x 1 or QD

THEN: [roupoint] is given the value [roupoint] + 1

Rule Number: 169

IF: Patient order for S & A is: S & A x 2 or BID

THEN: [roupoint] is given the value [roupoint] + 2

Rule Number: 170

IF: Patient order for S & A is: S & A x 3 or TID

THEN: [roupoint] is given the value [roupoint] + 3

Rule Number: 171

IF: Patient order for S & A is: S & A x 4 or QID

THEN: [roupoint] is given the value [roupoint] + 4

Rule Number: 172

IF: Patient order for S & A is: S & A x 6 or q4h

THEN: [roupoint] is given the value [roupoint] + 6

Rule Number: 173

IF: Patient order for S & A is: S & A x 12 or q2h

THEN: [roupoint] is given the value [roupoint] + 12

Rule Number: 174

IF: Patient order for S & A is: S & A x 24 or q1h

THEN: [roupoint] is given the value [roupoint] + 24

Rule Number: 175

IF: Patient order for S & A is: Not ordered

THEN: [roupoint] is given the value: no points awarded



Rule Number: 176

IF: Patient order for Sp Gr is: Sp Gr x 1 or QD  
THEN: [roupoint] is given the value [roupoint] + 1

Rule Number: 177

IF: Patient order for Sp Gr is: Sp Gr x 2 or BID  
THEN: [roupoint] is given the value [roupoint] + 2

Rule Number: 178

IF: Patient order for Sp Gr is: Sp Gr x 3 or TID  
THEN: [roupoint] is given the value [roupoint] + 3

Rule Number: 179

IF: Patient order for Sp Gr is: Sp Gr x 4 or QID  
THEN: [roupoint] is given the value [roupoint] + 4

Rule Number: 180

IF: Patient order for Sp Gr is: Sp Gr x 6 or q4h  
THEN: [roupoint] is given the value [roupoint] + 6

Rule Number: 181

IF: Patient order for Sp Gr is: Sp Gr x 12 or q2h  
THEN: [roupoint] is given the value [roupoint] + 12

Rule Number: 182

IF: Patient order for Sp Gr is: Sp Gr x 24 or q1h  
THEN: [roupoint] is given the value [roupoint] + 24

Rule Number: 183

IF: Patient order for Sp Gr is: Not ordered  
THEN: [roupoint] is given the value: no points awarded

Rule Number: 184

IF: Patient order for Guaiac stools is: Guaiac stools x 1  
or QD  
THEN: [roupoint] is given the value [roupoint] + 1

Rule Number: 185

IF: Patient order for Guaiac stools is: Guaiac stools x 2  
or BID  
THEN: [roupoint] is given the value [roupoint] + 2

Rule Number: 186

IF: Patient order for Guaiac stools is: Guaiac stools x 3  
or TID  
THEN: [roupoint] is given the value [roupoint] + 3

Rule Number: 187

IF: Patient order for Guaiac stools is: Guaiac stools x 4

or QID  
 THEN: [roupoint] is given the value [roupoint] + 4

Rule Number: 188  
 IF: Patient order for Gujac stools is: Gujac stools x 6  
 or q4h  
 THEN: [roupoint] is given the value [roupoint] + 6

Rule Number: 189  
 IF: Patient order for Gujac stools is: Gujac stools x 12  
 or q2h  
 THEN: [roupoint] is given the value [roupoint] + 12

Rule Number: 190  
 IF: Patient order for Gujac stools is: Gujac stools x 24  
 or q1h  
 THEN: [roupoint] is given the value [roupoint] + 24

Rule Number: 191  
 IF: Patient order for Gujac stools is: Not ordered  
 THEN: [roupoint] is given the value: no points awarded

Rule Number: 192  
 IF: Patient order for spin HCT is: Spin HCT x 1 or QD  
 THEN: [roupoint] is given the value [roupoint] + 1

Rule Number: 193  
 IF: Patient order for spin HCT is: Spin HCT x 2 or BID  
 THEN: [roupoint] is given the value [roupoint] + 2

Rule Number: 194  
 IF: Patient order for spin HCT is: Spin HCT x 3 or IID  
 THEN: [roupoint] is given the value [roupoint] + 3

Rule Number: 195  
 IF: Patient order for spin HCT is: Spin HCT x 4 or QID  
 THEN: [roupoint] is given the value [roupoint] + 4

Rule Number: 196  
 IF: Patient order for spin HCT is: Spin HCT x 6 or q4h  
 THEN: [roupoint] is given the value [roupoint] + 6

Rule Number: 197  
 IF: Patient order for spin HCT is: Spin HCT x 12 or q2h  
 THEN: [roupoint] is given the value [roupoint] + 12

Rule Number: 198  
 IF: Patient order for spin HCT is: Spin HCT x 24 or q1h  
 THEN: [roupoint] is given the value [roupoint] + 24

Rule Number: 199

IF: Patient order for spin HCT is: Not ordered

THEN: [roupoint] is given the value: no points awarded

Rule Number: 200

IF: Patient order for lab studies is: Lab studies less than x 6

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 201

IF: Patient order for lab studies is: Lab studies x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 202

IF: Patient order for lab studies is: Lab studies x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 203

IF: Patient order for lab studies is: Lab studies x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 204

IF: Patient order for lab studies is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 205

IF: Patient order for ABG sticks is: ABG sticks, less than x 3

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 206

IF: Patient order for ABG sticks is: ABG sticks, at least x 3, but less than x 6

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 207

IF: Patient order for ABG sticks is: ABG sticks x 6

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 208

IF: Patient order for ABG sticks is: ABG sticks x 12

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 209

IF: Patient order for ABG sticks is: ABG sticks x 24

THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 210

IF: Patient order for ABG sticks is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 211

IF: Patient order for blood cultures is: Blood cultures  
less than x 3

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 212

IF: Patient order for blood cultures is: Blood cultures  
at least x 3 but less than x 6

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 213

IF: Patient order for blood cultures is: Blood cultures  
x 6

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 214

IF: Patient order for blood cultures is: Blood cultures  
x 12

THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 215

IF: Patient order for blood cultures is: Blood cultures  
x 24

THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 216

IF: Patient order for blood cultures is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 217

IF: Patient order for medications is: Medications less  
than q8h [exclude IV]

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 218

IF: Patient order for medications is: Medications q3h -  
q8h [exclude IV] - up to 12 trips

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 219

IF: Patient order for medications is: Medications q2h or  
more [exclude IV] - > 12 trips

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 220

IF: Patient order for medications is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 221

IF: Patient order for irrigations is: Irrigations x 4  
[QID] or less

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 222

IF: Patient order for irrigations is: Irrigations x 6  
or q4h

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 223

IF: Patient order for irrigations is: Irrigations x 12  
or q2h

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 224

IF: Patient order for irrigations is: Irrigations x 24  
or q1h

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 225

IF: Patient order for irrigations is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 226

IF: Patient order for instillations is: Instillations  
x 4 [QID] or less

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 227

IF: Patient order for instillations is: Instillations  
x 6 or q4h

THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 228

IF: Patient order for instillations is: Instillations  
x 12 or q2h

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 229

IF: Patient order for instillations is: Instillations  
x 24 or q1h

THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 230

IF: Patient order for instillations is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 231

IF: Patient order for restraints is: 2 point  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 232

IF: Patient order for restraints is: 4 point  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 233

IF: Patient order for restraints is: Posey  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 234

IF: Patient order for restraints is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 235

IF: Patient order for assist to chair/stretcher is:  
Assist to chair less than x 3  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 236

IF: Patient order for assist to chair/stretcher is:  
Assist to stretcher less than x 3  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 237

IF: Patient order for assist to chair/stretcher is:  
Assist to stretcher by at least 3 but less than 6  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 238

IF: Patient order for assist to chair/stretcher is:  
Assist to stretcher x 6 or q4h  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 239

IF: Patient order for assist to chair/stretcher is:  
Assist to stretcher x 12 or q2h  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 240

IF: Patient order for assist to chair/stretcher is:  
Assist to stretcher x 24 or q1h  
THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 241

IF: Patient order for assist to chair/stretchers is:  
Assist to chair at least x 3 but less than x 6  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 242

IF: Patient order for assist to chair/stretchers is:  
Assist to chair x 6 or q4h  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 243

IF: Patient order for assist to chair/stretchers is:  
Assist to chair x 12 or q2h  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 244

IF: Patient order for assist to chair/stretchers is:  
Assist to chair x 24 or q1h  
THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 245

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 1  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 246

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 2  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 247

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 3  
THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 248

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 4  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 249

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 6  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 250

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 12  
THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 251

IF: Patient order for assist to chair/stretchers is:  
Ambulate with assistance x 24

THEN: [ptpoint] is given the value [ptpoint] + 48

Rule Number: 252

IF: Patient order for assist to chair/stretchers is: Not  
ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 253

IF: Patient order for infant circumcision care is:  
Infant circumcision care

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 254

IF: Patient order for infant circumcision care is: Not  
ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 255

IF: Patient order for phototherapy is: Phototherapy

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 256

IF: Patient order for phototherapy is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 257

IF: Patient order for isolation is: Isolation (change  
gown and gloves less than x 8)

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 258

IF: Patient order for isolation is: Isolation (change  
gown and gloves x 8 or more)

THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 259

IF: Patient order for isolation is: Not ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 260

IF: Patient order for accompany patient off ward is:  
Accompany patient off ward for less than 15 min

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 261

IF: Patient order for accompany patient off ward is:



Accompany patient off ward for 15 to 30 min  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 262

IF: Patient order for accompany patient off ward is:  
Accompany patient off ward for greater than 30 min  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 263

IF: Patient order for accompany patient off ward is: Not  
ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 264

IF: Patient order for other activities is: Other  
activities requiring less than 15 minutes  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 265

IF: Patient order for other activities is: Other  
activities requiring 15 to 30 minutes  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 266

IF: Patient order for other activities is: Other  
activities requiring 30 min to 1 hour  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 267

IF: Patient order for other activities is: Special  
procedures > 1 hr < 2 hr (requiring continuous staff  
attendance)  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 268

IF: Patient order for other activities is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 269

IF: Patient order for chest tube insertion is: Chest  
tube insertion  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 270

IF: Patient order for chest tube insertion is: Not  
ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 271

IF: Patient order for lumbar puncture is: Lumbar

puncture  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 272  
 IF: Patient order for lumbar puncture is: Not  
 ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 273  
 IF: Patient order for thoracentesis is: Thoracentesis  
 ordered  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 274  
 IF: Patient order for thoracentesis is: Not  
 ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 275  
 IF: Patient order for paracentesis is: Paracentesis  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 276  
 IF: Patient order for paracentesis is: Not ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 277  
 IF: Patient order for range of motion is: Range of  
 motion exercises less than x 3 or IID  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 278  
 IF: Patient order for range of motion is: Range of  
 motion exercises at least x 3 but less than x 6  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 279  
 IF: Patient order for range of motion is: Range of  
 motion exercises x 6 or q4h  
 THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 280  
 IF: Patient order for range of motion is: Range of  
 motion exercises x 12 or q2h  
 THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 281  
 IF: Patient order for range of motion is: Range of  
 motion exercises x 24 or q1h  
 THEN: [ptpoint] is given the value [ptpoint] + 32

Rule Number: 282

IF: Patient order for range of motion is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 283

IF: Patient order to transfer in-house or new admission  
is: Transfer in-house [assess and orient]  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 284

IF: Patient order to transfer in-house or new admission  
is: New admission [assess and orient]  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 285

IF: Patient order to transfer in-house or new admission  
is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 286

IF: Patient order for O2 therapy or oxyhood is: Oxygen  
therapy  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 287

IF: Patient order for O2 therapy or oxyhood is: Oxyhood  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 288

IF: Patient order for O2 therapy or oxyhood is: Not  
ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 289

IF: Patient order for incentive spirometer is: Incentive  
spirometer less than q4h  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 290

IF: Patient order for incentive spirometer is: Incentive  
spirometer q4h  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 291

IF: Patient order for incentive spirometer is: Incentive  
spirometer q2h  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 292

IF: Patient order for incentive spirometer is: Incentive

spirometer q1h  
 THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 293  
 IF: Patient order for incentive spirometer is: Not  
 ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 294  
 IF: Patient order for C&DB is: C&DB less than q4h  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 295  
 IF: Patient order for C&DB is: C&DB q4h  
 THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 296  
 IF: Patient order for C&DB is: C&DB q2h  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 297  
 IF: Patient order for C&DB is: C&DB q1h  
 THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 298  
 IF: Patient order for C&DB is: Not ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 299  
 IF: Patient order for IPPB or maximist is: IPPB or  
 maximist less than BID or x 2  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 300  
 IF: Patient order for IPPB or maximist is: IPPB or  
 maximist BID or x 2  
 THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 301  
 IF: Patient order for IPPB or maximist is: IPPB or  
 maximist TID or x 3  
 THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 302  
 IF: Patient order for IPPB or maximist is: IPPB or  
 maximist QID or x 4  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 303  
 IF: Patient order for IPPB or maximist is: IPPB or

maximist q4h or x 6  
THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 304  
IF: Patient order for IPPB or maximist is: IPPB or  
maximist q2h or x 12  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 305  
IF: Patient order for IPPB or maximist is: IPPB or  
maximist q1h or x 24  
THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 306  
IF: Patient order for IPPB or maximist is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 307  
IF: Patient order for croup tent or mist tent is: Croup  
tent  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 308  
IF: Patient order for croup tent or mist tent is: Mist  
tent  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 309  
IF: Patient order for croup tent or mist tent is: Not  
ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 310  
IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy less than BID or x 2  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 311  
IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy BID or x 2  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 312  
IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy TID or x 3  
THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 313  
IF: Patient order for chest pulmonary therapy is: Chest

pulmonary therapy QID or x 4  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 314

IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy q4h or x 6  
THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 315

IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy q2h or x 12  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 316

IF: Patient order for chest pulmonary therapy is: Chest  
pulmonary therapy q1h or x 24  
THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 317

IF: Patient order for chest pulmonary therapy is: Not  
ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 318

IF: Patient order for suctioning is: Suctioning less  
than q4h or x 6  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 319

IF: Patient order for suctioning is: Suctioning q4h or  
x 6  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 320

IF: Patient order for suctioning is: Suctioning q2h or  
x 12  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 321

IF: Patient order for suctioning is: Suctioning q1h or  
x 24  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 322

IF: Patient order for suctioning is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 323

IF: Patient order for trach care is: Trach care less

than x 3 or TID  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 324  
 IF: Patient order for trach care is: Trach care at least  
 TID (or x 3) but less than q4h (x 6)  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 325  
 IF: Patient order for trach care is: Trach care q4h or  
 x 6  
 THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 326  
 IF: Patient order for trach care is: Trach care q2h or  
 x 12  
 THEN: [ptpoint] is given the value [ptpoint] + 16

Rule Number: 327  
 IF: Patient order for trach care is: Trach care q1h or  
 x 24  
 THEN: [ptpoint] is given the value [ptpoint] + 32

Rule Number: 328  
 IF: Patient order for trach care is: Not ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 329  
 IF: Patient order for ventilator is: Ventilator  
 THEN: [ptpoint] is given the value [ptpoint] + 10

Rule Number: 330  
 IF: Patient order for ventilator is: Not ordered  
 THEN: [ptpoint] is given the value: no points awarded

Rule Number: 331  
 IF: Patient order for hanging IV bottles is: KVO (change  
 bottle BID or less)  
 THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 332  
 IF: Patient order for hanging IV bottles is: Simple  
 (change bottle TID or QID)  
 THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 333  
 IF: Patient order for hanging IV bottles is: Complex  
 (change bottle q4h or more, two or more sites, or  
 multilumen tube)  
 THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 334

IF: Patient order for hanging IV bottles is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 335

IF: Patient order for heparin lock or Broviac catheter  
is: Heparin lock  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 336

IF: Patient order for heparin lock or Broviac catheter  
is: Broviac catheter  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 337

IF: Patient order for heparin lock or Broviac catheter  
is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 338

IF: Patient order for IV medications is: IV medications  
of less than q8h or x 3  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 339

IF: Patient order for IV medications is: IV medications  
of q8h or x 3  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 340

IF: Patient order for IV medications is: IV medications  
of q6h or x 4  
THEN: [ptpoint] is given the value [ptpoint] + 3

Rule Number: 341

IF: Patient order for IV medications is: IV medications  
of q4h or x 6  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 342

IF: Patient order for IV medications is: IV medications  
of q2h or x 12  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 343

IF: Patient order for IV medications is: IV medications  
of q1h or x 24  
THEN: [ptpoint] is given the value [ptpoint] + 16



Rule Number: 344

IF: Patient order for IV medications is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 345

IF: Patient order for blood products is: Blood products  
x 1 unit  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 346

IF: Patient order for blood products is: Blood products  
x 2 unit  
THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 347

IF: Patient order for blood products is: Blood products  
x 3 unit  
THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 348

IF: Patient order for blood products is: Blood products  
x 4 unit  
THEN: [ptpoint] is given the value [ptpoint] + 8

Rule Number: 349

IF: Patient order for blood products is: Blood products  
x 6 unit  
THEN: [ptpoint] is given the value [ptpoint] + 12

Rule Number: 350

IF: Patient order for blood products is: Blood products  
x 12 unit  
THEN: [ptpoint] is given the value [ptpoint] + 24

Rule Number: 351

IF: Patient order for blood products is: Blood products  
x 24 unit  
THEN: [ptpoint] is given the value [ptpoint] + 48

Rule Number: 352

IF: Patient order for blood products is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 353

IF: Patient order for group teaching is: Group teaching  
THEN: [ptpoint] is given the value [ptpoint] + 2

Rule Number: 354

IF: Patient order for group teaching is: Not ordered  
THEN: [ptpoint] is given the value: no points awarded

Rule Number: 355

IF: Patient order for preoperative teaching is:  
Preoperative teaching

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 356

IF: Patient order for preoperative teaching is: Not  
ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 357

IF: Patient order for structured teaching is: Structured  
teaching (i.e. diabetic, cardiac, colostomy care,  
post partum first 24 hr, newborn care, discharge)

THEN: [ptpoint] is given the value [ptpoint] + 4

Rule Number: 358

IF: Patient order for structured teaching is: Not  
ordered

THEN: [ptpoint] is given the value: no points awarded

Rule Number: 359

IF: Patient order for emotional support is: Patient/  
family support (i.e. anxiety, denial, loneliness,  
etc.)

THEN: [emopoint] is given the value [emopoint] + 4

Rule Number: 360

IF: Patient order for emotional support is: Not ordered

THEN: [emopoint] is given the value: no points awarded

Rule Number: 361

IF: Patient order for modification of lifestyle is:  
Emotional support for modification of lifestyle  
(i.e. new prosthesis, body image, behavior  
modification, etc.)

THEN: [emopoint] is given the value [emopoint] + 4

Rule Number: 362

IF: Patient order for modification of lifestyle is: Not  
ordered

THEN: [emopoint] is given the value: no points awarded

Rule Number: 363

IF: Patient order for sensory deprivation is: Emotional  
support for sensory deprivation (i.e. retarded,  
blind, deaf, language barrier, bilateral eye  
patches, confused, combative, etc.)

THEN: [emopoint] is given the value [emopoint] + 6

Rule Number: 364

IF: Patient order for sensory deprivation is: Not  
ordered

THEN: [emopoint] is given the value: no points awarded

Rule Number: 365

IF: Patient order for cardiac monitor is: Cardiac  
monitor

THEN: [monpoint] is given the value [monpoint] + 6

Rule Number: 366

IF: Patient order for cardiac monitor is: Not ordered

THEN: [monpoint] is given the value: no points awarded

Rule Number: 367

IF: Patient order for apnea monitor is: Apnea monitor

THEN: [monpoint] is given the value [monpoint] + 6

Rule Number: 368

IF: Patient order for apnea monitor is: Not ordered

THEN: [monpoint] is given the value: no points awarded

Rule Number: 369

IF: Patient order for temp monitor is: Temp monitor

THEN: [monpoint] is given the value [monpoint] + 6

Rule Number: 370

IF: Patient order for temp monitor is: Not ordered

THEN: [monpoint] is given the value: no points awarded

Rule Number: 371

IF: Patient order for pressure monitor is: Pressure  
monitor

THEN: [monpoint] is given the value [monpoint] + 6

Rule Number: 372

IF: Patient order for pressure monitor is: Not ordered

THEN: [monpoint] is given the value: no points awarded

Rule Number: 373

IF: [monpoint] > 0

THEN: [ptpoint] is given the value [ptpoint] + 6

Rule Number: 374

IF: [roupoint] > 5

THEN: [ptpoint] is given the value [ptpoint] +  
[roupoint]

Rule Number: 375

IF: [emopoint] > 0 and [emopoint] < 11

THEN: [ptpoint] is given the value [ptpoint] +  
[emopoint]

Rule Number: 376

IF: [emopoint] > 10

THEN: [ptpoint] is given the value [ptpoint] + 10

Rule Number: 377

IF: [ptpoint] >= 0 and [ptpoint] < 13

THEN: Patient category is: I Self Care/Minimal Care

Rule Number: 378

IF: [ptpoint] > 12 and [ptpoint] < 32

THEN: Patient category is: II Moderate Care

Rule Number: 379

IF: [ptpoint] > 31 and [ptpoint] < 64

THEN: Patient category is: III Acute Care (1 staff to 3  
patients)

Rule Number: 380

IF: [ptpoint] > 63 and [ptpoint] < 96

THEN: Patient category is: IV Intensive Care (1 staff  
to 2 patients)

Rule Number: 381

IF: [ptpoint] > 95 and [ptpoint] < 146

THEN: Patient category is: V Continuous Care (1 staff  
to 1 patients)

Rule Number: 382

IF: [ptpoint] > 145

THEN: Patient category is: VI Critical Care (1 staff  
to 1 patients)

# APPENDIX E

## PROGRAM LISTINGS

```

**** INTRO.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 26 November 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Introductory screen for the proto-
* type model.
* Input Files Used: Intro.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: None
* Routine Called: Valid.Prg
* Modification Date: 18 February 1986
*
* -- Screen Input Program For Intro --
*
Set Procedure To B:Procfile
Do Setup
Public Flash
Flash = Chr(145)

Do While .T.

* -- Screen display B:Intro.Scr --

Set Procedure To B:Procfile
Set Color To W+/B, /
Clear
?? Flash+"S.B: Intro.Scr/"
Set Color To W+/B, /W
@ 24,0
Set Console Off
Wait
Set Console On
Do B:Valid

Enddo

```

\*\*\*\* PROCFILE.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 1 December 1985  
\* Purpose: See comments above each procedure.  
\* Input Files Used: None  
\* Output Files Used: Orders and Ncaredb.Dbf  
\* Calling Routine: All modules  
\* Routine Called: None  
\* Modification Date: 18 February 1986

\*  
\*

\* -- Screen headers after patient selection --

#### Procedure Headings

@ 2,3 Say Ptselect  
@ 2,42 Say Ptregno  
@ 2,56 Say Date()  
@ 2,65 Say Time()  
@ 22,3 Say Curuser  
Return

\* -- Used to reset pointer and put data from variable  
\* -- names into Orders.Dbf --

#### Procedure Replaord

Store DTOC(Date()) To Now  
Use B:Orders  
Do While .Not. EOF()  
    Skip  
Enddo  
Append Blank  
Replace Order With Morder  
Replace Fmpssn With Ptfmpssn  
Replace Freq With Ofreq  
Replace Otime With Time()  
Replace Odate With Now  
Replace Prac With Curuser  
Replace Expertsys With Passdata  
Replace Onlytoday With Todayonly  
Replace Critical With Ptpoint  
Replace Module With Omodule  
Replace Monpt With Monpoint  
Replace Emopt With Emopoint  
Replace Roupt With Roupoint  
Return

```
* -- Used to reset pointer and put data from variable
* -- names into Ncaredb.Dbf --
```

#### Procedure Reprnord

```
Use B:Ncaredb
Do While .Not. EOF()
    Skip
Enddo
Append Blank
Replace Nfmpssn With Ptfmpssn
Replace Nord With Morder
Replace Ntime With Time()
Replace Ndate With Date()
Replace Nurse With Curuser
Replace Ndiag With Nursdiag
Replace Assess With Nassess
Replace Relate With Nrelate
Replace Goal With Ngoal
Replace Nfreq With Ofreq
Replace Emotea With Emoteach
Return
```

```
* -- Determine the current nursing care level --
```

#### Procedure Current

```
Xgoa4cur = "B"
@ 23,67 Get Xgoa4cur Pict "!"
Read
Do While .Not. (Xgoa4cur = "A" .Or. Xgoa4cur = "B" .Or.
    Xgoa4cur = "C" .Or. Xgoa4cur = "D" .Or. Xgoa4cur = "E")
    @ 23,67 Clear
    Store " " To Xgoa4cur
    @ 24,0 Say "Re-Enter Letter A, B, C, D or E"
    @ 23,67 Get Xgoa4cur Pict "!"
    Read
Enddo
```

```
* -- Assign value to letter selected --
```

```
Do Case
    Case Xgoa4cur = "A"
        Morder = "Infant/Toddler Care"
        Passdata = "Q23 1"
        Ptpoint = 6
    Case Xgoa4cur = "B"
        Morder = "Self/Minimum Care"
```

```

        Passdata = "Q23 2"
        Ptpoint = 2
    Case Xgoa4cur = "C"
        Morder = "Assisted Care"
        Passdata = "Q23 3"
        Ptpoint = 6
    Case Xgoa4cur = "D"
        Morder = "Complete Care"
        Passdata = "Q23 4"
        Ptpoint = 14
    Case Xgoa4cur = "E"
        Morder = "Total Care"
        Passdata = "Q23 5"
        Ptpoint = 32
Endcase
Return

```

```

* -- Used to evaluate the proper value to pass to the
* -- expert system for oral, IM or subq medication
* -- category options --

```

#### Procedure Regmeds

```

Do Case
    Case (Timeopt < 25 .Or. Timeopt = 41)
        * -- Less than x 3 or TID
        Passdata = "Q47 1"
        Ptpoint = 0
    Case (Timeopt > 24 .And. Timeopt < 36)
        * -- X 3 or TID up to x 12 trips
        Passdata = "Q47 2"
        Ptpoint = 2
    Case (Timeopt > 35 .And. Timeopt < 40)
        * -- More than 12 trips
        Passdata = "Q47 3"
        Ptpoint = 4
Endcase
Return

```

```

* -- Used to evaluate the proper value to pass to the
* -- expert system for laboratory category options --

```

#### Procedure Labcount

```

Do Case
    Case (Timeopt < 34 .Or. Timeopt = 41)
        Passdata = "Q44 1"
        Ptpoint = 0

```



```

      Case (Timeopt = 34 .Or. Timeopt = 35)
        Passdata = "Q44 2"
        Ptpoint = 2
      Case (Timeopt = 36 .Or. Timeopt = 37)
        Passdata = "Q44 3"
        Ptpoint = 4
      Case (Timeopt = 38 .Or. Timeopt = 39)
        Passdata = "Q44 4"
        Ptpoint = 8
    Endcase
  Return

```

\* -- Determine the liter flow rate of oxygen --

#### Procedure Liter

```

  Xliteropt = "A"
  @ 23,66 Get Xliteropt Pict "!"
  Read
  Do While .Not. (Xliteropt = "A" .Or. Xliteropt = "B".Or.;
    Xliteropt= "C".Or. Xliteropt= "D".Or. Xliteropt= "E")
    @ 23,66 Clear
    Store " " To Xliteropt
    @ 24,0 Say "Re-Enter Letter A, B, C, D or E"
    @ 23,66 Get Xliteropt Pict "!"
    Read
  Enddo

  * -- Assign value to letter selected --
  Do Case
    Case Xliteropt = "A"
      Xliter = "@ 1-2 l/m"
    Case Xliteropt = "B"
      Xliter = "@ 3-4 l/m"
    Case Xliteropt = "C"
      Xliter = "@ 5-6 l/m"
    Case Xliteropt = "B"
      Xliter = "@ 7-8 l/m"
    Case Xliteropt = "B"
      Xliter = "@ 9-10 l/m"
  Endcase
  Return

```

\* -- Used to evaluate the proper value to pass to the ex-  
 \* -- part system for IV medication category options --

## Procedure IUmeds

### Do Case

```
Case [Timeopt < 25 .Or. Timeopt = 41]
  * -- Less than Q8h or IID
  Passdata = "Q74 1"
  Ptpoint = 0
Case [Timeopt > 24 .And. Timeopt < 31]
  * -- Q8h or IID
  Passdata = "Q74 2"
  Ptpoint = 2
Case [Timeopt > 30 .And. Timeopt < 34]
  * -- Q6h or x 4
  Passdata = "Q74 3"
  Ptpoint = 3
Case [Timeopt = 34 .Or. Timeopt = 35]
  * -- Q4h or x 6
  Passdata = "Q74 4"
  Ptpoint = 4
Case [Timeopt = 36 .Or. Timeopt = 37]
  * -- Q2h or x 12
  Passdata = "Q74 5"
  Ptpoint = 8
Case [Timeopt = 38 .Or. Timeopt = 39]
  * -- Q1h or x 24
  Passdata = "Q74 6"
  Ptpoint = 16
```

### Endcase

Return

\* -- Initialize variables in the order modules --

## Procedure Startup

```
Ofreq = " "
Ptpoint = 0
Passdata = " "
Todayonly = "F"
Emopoint = 0
Monpoint = 0
Raupoint = 0
Return
```

\* -- Used to evaluate the proper value to pass to the  
\* -- expert system for range of motion category --

## Procedure Range

```
Do Case
  Case (Timeopt < 25 .Or. Timeopt = 41)
    * -- Less than x 3
    Passdata = "Q61 1"
    Ptpoint = 0
  Case (Timeopt > 24 .And. Timeopt < 34)
    * -- X 3 or less than x 6
    Passdata = "Q61 2"
    Ptpoint = 4
  Case (Timeopt = 34 .Or. Timeopt = 35)
    * -- X 6 or Q4h
    Passdata = "Q61 3"
    Ptpoint = 8
  Case (Timeopt = 36 .Or. Timeopt = 37)
    * -- X 12 or Q2h
    Passdata = "Q61 4"
    Ptpoint = 16
  Case (Timeopt = 38 .Or. Timeopt = 39)
    * -- X 24 or Q1h
    Passdata = "Q61 5"
    Ptpoint = 32
Endcase
Return
```

```
* -- Used to evaluate the proper value to pass to the
* -- expert system for cough and deep breathe category
* -- option --
```

## Procedure Cough

```
Do Case
  Case (Timeopt < 34 .Or. Timeopt = 41)
    * -- Less than Q4h or x 6
    Passdata = "Q65 1"
    Ptpoint = 0
  Case (Timeopt = 34 .Or. Timeopt = 35)
    * -- Q4h or x 6
    Passdata = "Q65 2"
    Ptpoint = 2
  Case (Timeopt = 36 .Or. Timeopt = 37)
    * -- Q2h or x 12
    Passdata = "Q65 3"
    Ptpoint = 4
  Case (Timeopt = 38 .Or. Timeopt = 39)
    * -- Q1h or x 24
```

```

        Passdata = "Q6S 4"
        Ptpoint = 8
    Endcase
Return

* -- Sets up the initial environment for each module --

Procedure Setup

    Clear
    Set Escape On
    Set Talk Off
    Set Echo Off
Return

* -- Used to evaluate the proper value to pass to the
* -- expert system for S&A, specific gravity, Gujac
* -- and spin Hct category option --

Procedure Routine
Do Case
    Case [Timeopt < 5 .Or. Timeopt = 41]
        * -- No specific frequency ordered
        Roupoint = 0
    Case [Timeopt > 4 .And. Timeopt < 22]
        * -- X 1 or QD
        Roupoint = 1
    Case [Timeopt > 21 .And. Timeopt < 25]
        * -- X 2 or BID
        Roupoint = 2
    Case [Timeopt > 24 .And. Timeopt < 31]
        * -- X 3 or IID
        Roupoint = 3
    Case [Timeopt > 30 .And. Timeopt < 34]
        * -- X 4 or QID
        Roupoint = 4
    Case [Timeopt = 34 .Or. Timeopt = 35]
        * -- X 6 or Q4h
        Roupoint = 6
    Case [Timeopt = 36 .Or. Timeopt = 37]
        * -- X 12 or Q2h
        Roupoint = 12
    Case [Timeopt = 38 .Or. Timeopt = 39]
        * -- X 24 or Q1h
        Roupoint = 24
    Endcase
Return

```

\*\*\*\*\* VALID.PRG \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 2 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Evaluate the validity of the  
\* password used.  
\* Input Files Used: Valid.Scr and Procfile.Prg  
\* Output Files Used: Useinfo.Dbf  
\* Calling Routine: Intro.Prg  
\* Routine Called: Master.Prg  
\* Modification Date: 18 February 1986

\* -- Screen Input Program For Valid --  
\*

Do Setup  
Public Xusepass, Curuser, Useacc  
Use B:Useinfo  
Xusepass = Space(5)  
Xusepas1 = Space(1)  
Xusepas2 = Space(1)  
Xusepas3 = Space(1)  
Xusepas4 = Space(1)  
Xusepas5 = Space(1)

Do While .T.

\* -- Screen Display A:Valid.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Valid.Scr/"  
Set Color To W+/B,W+/B  
@ 13,43

\* -- Places an "X" on the screen to mask the password  
\* -- entered --

Set Console Off  
Wait To Xusepas1  
@ 13,43 Say 'X'  
Wait To Xusepas2  
@ 13,45 Say 'X'  
Wait To Xusepas3  
@ 13,47 Say 'X'  
Wait To Xusepas4  
@ 13,49 Say 'X'  
Wait To Xusepas5  
@ 13,51 Say 'X'

```
Xusepass =;  
  Upper[Xusepas1+Xusepas2+Xusepas3+Xusepas4+Xusepas5]  
Set Console On
```

```
* -- Evaluates the password entered --
```

```
Locate For Xusepass = Codeword  
If (Xusepass <> Codeword) .And. EOF()  
  @ 24,15 Say "INVALID PASSWORD -- HIT ANY KEY"  
  @ 24,51 Say " AND RE-ENTER"  
  Set Console Off  
  Wait  
  Set Console On  
  Loop  
Endif  
Store Ufinitial + ' ' + Trim(Ulname) To Curuser  
Store Access To Useacc  
@ 24,0  
@ 23,80 Clear  
@ 24,7 Say "Your Password Has Been Accepted -- "  
@ 24,42 Say "Please Press A Key To Continue"  
Set Console Off  
Wait  
Set Console On  
Do B:Master
```

```
Enddo
```

```

**** MASTER.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 26 November 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Menu program to branch between the
* admission's department, the
* database administration and
* the patient care personnel.
* Input Files Used: Master.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Valid.Prg
* Routine Called: Admit, Ward or Adddelete.Prg
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Master --
*
Do Setup
Public Xmasopt,Omodule
Omodule = Space(1)

Do While .T.

    * -- Screen Display B:Master.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.B:Master.Scr/"
    Set Color To W+/B,W+/B
    Xmasopt = 0
    @ 2,56 Say Date()
    @ 2,65 Say Time()
    @ 22,3 Say Curuser
    @ 22,67 Get Xmasopt Pict "S" Range 0,4
    Read

    * -- Evaluate action based on the option selected --
    * -- Validate user's access to area selected --

Do Case

    Case Xmasopt = 0
        * -- Sign-Off
        Close Databases
        Close Procedure
        Release All
        Return To Master

```

```

Case Xmasopt = 1
* -- Admission's Department
Do Case
  Case Useacc = 2 .Or. Useacc = 3 .Or. Useacc = 4
    @ 24,16 Say "Access Not Allowed -- Press "
    @ 24,44 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Loop
  Case Useacc = 0 .Or. Useacc = 1
    Do B:Admit
  Endcase

```

```

Case Xmasopt = 2
* -- Doctor Master
Do Case
  Case Useacc = 1 .Or. Useacc = 2 .Or. Useacc = 3
    @ 24,16 Say "Access Not Allowed -- Press "
    @ 24,44 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Loop
  Case Useacc = 0 .Or. Useacc = 4
    Omodule = "D"
    Do B:Ward
  Endcase

```

```

Case Xmasopt = 3
* -- Nursing Master
Do Case
  Case Useacc = 1 .Or. Useacc = 2 .Or. Useacc = 4
    @ 24,16 Say "Access Not Allowed -- Press "
    @ 24,44 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Loop
  Case Useacc = 0 .Or. Useacc = 3
    Omodule = "N"
    Do B:Ward
  Endcase

```

```

Case Xmasopt = 4
* -- System Administration
Do Case
  Case Useacc = 1 .Or. Useacc = 3 .Or. Useacc = 4
    @ 24,16 Say "Access Not Allowed -- Press "
    @ 24,44 Say "Any Key To Continue"

```



```
Set Console Off
Wait
Set Console On
Loop
Case Useacc = 0 .Or. Useacc = 2
Do B:Addelete
Endcase
Endcase
Release Xmasopt
Enddo
```

\*\*\*\* ADMIT.PRГ \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 9 January 1986  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Allows the admitting personnel to  
\* choose to admit or discharge a  
\* patient.  
\* Input Files Used: Admit.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Master.Prg  
\* Routine Calls: Pt\_Info or Discharg.Prg  
\* Modification Date: 25 January 1986

\* -- Screen Input Program For Admit --

Do Setup  
Public Xadmitopt

Do While .T.

\* -- Screen Display B:Admit.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.B:Admit.Scr/"  
Set Color To W+/B,W+/B  
Xadmitopt = 0  
@ 22,3 Say Curuser  
@ 22,67 Get Xadmitopt Pict "9" Range 0,2  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xadmitopt = 0

\* -- Sign-Off  
Close Databases  
Release All  
Close Procedure  
Return To Master

Case Xadmitopt = 1

\* -- Admit A Patient  
Do B:Pt\_Info  
Loop

Case Xadmitopt - 2  
\* -- Discharge A Patient  
Do B:Discharg  
Loop

Endcase  
Release Xadmitopt

Enddo

\*\*\*\*\* PT\_INFO.PRG \*\*\*\*\*

```
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 29 November 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Add a patient to the patient
* database file.
* Input Files Used: Pt_Info.Scr and Procfile.Prg
* Output Files Used: Pt_Info.Dbfi
* Calling Routine: Admit.Prg
* Routine Called: None
* Modification Date: 26 January 1986
```

```
* -- Screen Input Program for Pt_Info --
*
```

Do Setup

```
Public Xplname,Xpfname,Xpmname,Xraterank,Xfmpssan
Public Xpbdate,Xpage,Xpsex,Xpadmdate,Xpregno
Public Xpmeddiag,Xpphy,Xpprog,Xpall,Xpward,Xprm,Xpbed
Xplname = Space(20)
Xpfname = Space(12)
Xpmname = Space(3)
Xraterank = Space(11)
Xfmpssan = " - "+Space(9)
Xpbdate = Date()
Xpage = Space(3)
Xpsex = Space(1)
Xpadmdate = Date()
Xpregno = Space(8)
Xpmeddiag = Space(24)
Xpphy = Space(24)
Xpprog = Space(3)
Xpall = Space(24)
Xpward = Space(2)
Xprm = Space(1)
Xpbed = Space(1)
```

Do While .T.

```
* -- Screen Display B:Pt_Info.Scr --
```

```
Set Color To W+/B,W+/B
```

```
Clear
```

```
?? Flash+"S.B:Pt_Info.Scr/"
```

```
Set Color To W+/B,W+/B
```

```
@ 5,14 Get Xplname Pict "XXXXXXXXXXXXXXXXXXXXX"
```

```
@ 7,14 Get Xpfname Pict "XXXXXXXXXXXXX"
```

```
@ 9,14 Get Xpmname Pict "XX"
```

```
@ 11,14 Get Xraterank Pict "!!!!!!!!!"
```

```

@ 13,14 Get Xfmpssan Pict "99-999999999"
@ 15,14 Get Xpbdate;
  Range CTOD("01/01/00"),CTOD("12/31/99")
@ 17,14 Get Xpage Pict "XXX"
@ 19,14 Get Xpsex Pict "!"
@ 21,14 Get Xpadmdate;
  Range CTOD("01/01/00"),CTOD("12/31/99")
@ 5,55 Get Xpregno Pict "99999999"
@ 7,55 Get Xpmeddiag Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXX"
@ 9,55 Get Xpphy Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXX"
@ 11,55 Get Xpprog Pict "!!!"
@ 13,55 Get Xpall Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXX"

* -- Validate input for ward, room and bed assignment --

@ 15,55 Get Xpward Pict "9!"
Read
Do While .Not. (Xpward = "2E" .Or. Xpward = "3E")
  Xpward = Space(2)
  @ 24,0 Say "Re-Enter Either 2E or 3E"
  @ 15,55 Get Xpward Pict "9!"
  Read
Enddo
@ 24,0 Clear

@ 17,55 Get Xprm Pict "9"
Read
Do While .Not. (Xprm = "1" .Or. Xprm = "2" .Or.;
  Xprm = "3")
  Xprm = Space(1)
  @ 24,0 Say "Re-Enter Either 1 or 2 or 3"
  @ 17,55 Get Xprm Pict "9"
  Read
Enddo
@ 24,0 Clear

@ 19,55 Get Xpbed PICT "!"
Read
Do While .Not. (Xpbed = "A" .Or. Xpbed = "B")
  Xpbed = Space(1)
  @ 24,0 Say "Re-Enter Either A or B"
  @ 19,55 Get Xpbed Pict "!"
  Read
Enddo
@ 24,0 Clear

* -- Put data from variable names into Dbf file --

Use B:Pt_Info
Do While .Not. EOF()

```

Skip  
Enddo  
Append Blank

Replace Plname With Xplname  
Replace Pfname With Xpfname  
Replace Pmname With Xpmname  
Replace Raterank With Xraterank  
Replace Fmpssan With Xfmpssan  
Replace Pbdate With Xpbdate  
Replace Page With Xpage  
Replace Psex With Xpsex  
Replace Padmdate With Xpadmdate  
Replace Pregno With Xpregno  
Replace Pmeddiag With Xpmeddiag  
Replace Pphy With Xpphy  
Replace Pprog With Xpprog  
Replace Pall With Xpall  
Replace Pward With Xpward  
Replace Prm With Xprm  
Replace Pbed With Xpbed

Return  
Release Xplname, Xpfname, Xpmname, Xraterank, Xfmpssan  
Release Xpbdate, Xpage, Xpsex, Xpadmdate, Xpregno  
Release Xpmeddiag, Xpphy, Xpprog, Xpall, Xpward, Xprm, Xpbed

Enddo

\*\*\*\* DISCHARG.PRG \*\*\*\*

\* Author: Gary R. Karmeyer LCDR NC USN  
\* Date: 9 January 1986  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Discharge a patient.  
\* Input Files Used: Discharg.Scr and Procfile.Prg  
\* Output Files Used: Pt\_Info, Orders and Ncaredb.Dbf  
\* Calling Routine: Admit.Prg  
\* Routine Calls: None  
\* Modification Date: 18 February 1986

\* -- Screen Input Program For Discharg --  
\*

Do Setup

Public Xdischopt,Xdcfssn,Xdciname,Xdcfname

Public Xdciname,Xdcpphy,Xmdfmpssn,Xppack

Xppack = .F.

Select A

Use B:Pt\_Info

Select B

Use B:Orders

Select C

Use B:Ncaredb

Do While .T.

\* -- Store data from Dbf file into variable names --

Select A

Xdcfssn = Fmpssn

Xdciname = Piname

Xdcfname = Pfname

Xdciname = Pmname

Xdcpphy = Pphy

\* -- Screen Display B:Discharg.Scr --

Set Color To W+/B,W+/B

Clear

?? Flash+"S.B:Discharg.Scr/"

Set Color To W+/B,W+/B

Xdischopt = 1

@ 22,3 Say Curuser

@ 13,2 Say Xdcfssn

@ 13,17 Say Xdciname

@ 13,38 Say Xdcfname

@ 13,51 Say Xdciname

@ 13,55 Say Xdcpphy

@ 22,67 Get Xdischopt Pict "9" Range 0,3  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xdischopt = 0

\* -- Sign-Off

If Xppack = .I.

Pack

Endif

Close Databases

Close Procedure

Release All

Return To Master

Case Xdischopt = 1

\* -- Next Patient

Skip

If EOF ( )

@ 24,15 Say "No Additional Patients -- Press "

@ 24,47 Say "Any Key To Continue"

Set Console Off

Wait

Set Console On

If Xppack = .I.

Pack

Endif

Close Databases

Return

Else

Loop

Endif

Case Xdischopt = 2

\* -- Discharge patient

Xppack = .I.

Store "" + Xdcfssn + "" To Xmdfmpssn

\* -- Eliminate patient data from database files

Select B

Do While .Not. EOF( )

Locate For Fmpssn = &Xmdfmpssn

If .Not. EOF( )

Delete

Skip

Endif

Enddo

Pack



```

Select C
  Do While .Not. EOF()
    Locate For Nfmpssn = &Xmdfmpssn
    If .Not. EOF()
      Delete
      Skip
    Endif
  Enddo
Pack
Select A
  Delete
  Skip
  If EOF ()
    @ 24,15 Say "No Additional Patients -- Press "
    @ 24,47 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Pack
    Close Databases
    Return
  Else
    Loop
  Endif

Case Xdischopt = 3
  * -- Admit/Discharge Screen
  If Xppack = .T.
    Pack
  Endif
  Close Databases
  Return

Endcase
Release Xdischopt,Xdcfssn,Xdclname,Xdcfname
Release Xdcname,Xdcphy,Xmdfmpssn,Xppack

Enddo

```

\*\*\*\* WARD.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 26 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Determine word selection.  
\* Input Files Used: Ward.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Master.Prg  
\* Routine Called: Ward2 or Ward3.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Ward --  
\*

Do Setup

Public Xwardopt,Durpt,Ofreq,Passdata,Ptpoint,Todayonly  
Public Monpoint,Emopoint,Roupoint,Ptselect, Morder,Now  
Public Ptfmpesn,Ptregno  
Ofreq = Space[1]  
Passdata = Space[6]  
Ptpoint = 0  
Todayonly = "F"  
Monpoint = 0  
Emopoint = 0  
Roupoint = 0  
Morder = Space[27]  
Now = Space[8]

Do While .T.

\* -- Screen Display B:Ward.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.B:Ward.Scr/"  
Set Color To W+/B,W+/B  
Xwardopt = 3  
@ 2,56 Say Date()  
@ 2,65 Say Time()  
@ 22,3 Say Curuser  
@ 22,67 Get Xwardopt Pict "9" Range 0,3  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xwardopt = 0  
\* -- Sign-Off

Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xwardopt = 1  
\* -- 2E Surgical Ward  
Do B:Ward2  
Return

Case Xwardopt = 2  
\* -- 3E Medical Ward  
Do B:Ward3  
Return

Case Xwardopt = 3  
\* -- Master Screen  
Return

Endcase  
Release Xwardopt

Enddo

```

**** WARD2.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 26 November 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Displays patients assigned to ward
* 2E, for patient selection.
* Input Files Used: Ward2.Scr and Procfile.Prg
* Output Files Used: Pt_Info.Dbf
* Calling Routine: Master.Prg
* Routine Called: Doctor or Nurse.Prg
* Modification Date: 4 February 1986
*
* -- Screen input program for Ward2 --
*
Do Setup
Public Xwd2opt,Xpt1regno,Xpt2regno,Xpt3regno,Xpt4regno
Public Xpt5regno,Xpt6regno,Xpt1,Xpt2,Xpt3,Xpt4,Xpt5
Public Xpt1fmpssn,Xpt2fmpssn,Xpt3fmpssn,Xpt6
Public Xpt4fmpssn,Xpt5fmpssn,Xpt6fmpssn

* -- Store specific data from Dbf file into variable
* -- names --

Use B:Pt_Info
Locate For Prm = '1' .And. Pbed = 'A' .And. Pward = '2'
  Xpt1 = Pfname - [' ' +Plname]
  Xpt1regno = Pregno
  Xpt1fmpssn = Fmpssn
Locate For Prm = '1' .And. Pbed = 'B' .And. Pward = '2'
  Xpt2 = Pfname - [' ' +Plname]
  Xpt2regno = Pregno
  Xpt2fmpssn = Fmpssn
Locate For Prm = '2' .And. Pbed = 'A' .And. Pward = '2'
  Xpt3 = Pfname - [' ' +Plname]
  Xpt3regno = Pregno
  Xpt3fmpssn = Fmpssn
Locate For Prm = '2' .And. Pbed = 'B' .And. Pward = '2'
  Xpt4 = Pfname - [' ' +Plname]
  Xpt4regno = Pregno
  Xpt4fmpssn = Fmpssn
Locate For Prm = '3' .And. Pbed = 'A' .And. Pward = '2'
  Xpt5 = Pfname - [' ' +Plname]
  Xpt5regno = Pregno
  Xpt5fmpssn = Fmpssn
Locate For Prm = '3' .And. Pbed = 'B' .And. Pward = '2'
  Xpt6 = Pfname - [' ' +Plname]
  Xpt6regno = Pregno
  Xpt6fmpssn = Fmpssn

```

Do While .T.

\* -- Screen Display B:Ward2.Scr --

Set Color To W+/B,W+/B

Clear

?? Flash+"S.B:Ward2.Scr/"

Set Color To W+/B,W+/B

Xwd2opt = 7

@ 2,56 Say Date()

@ 2,65 Say Time()

@ 9,39 Say Xpt1

@ 10,39 Say Xpt2

@ 12,39 Say Xpt3

@ 13,39 Say Xpt4

@ 15,39 Say Xpt5

@ 16,39 Say Xpt6

@ 22,3 Say Curuser

@ 22,67 Get Xwd2opt Pict "9" Range 0,7

Read

\* -- Evaluate action based on the option selected --

\* -- Store data from Dbf file into variable names --

Do Case

Case Xwd2opt = 0

\* -- Sign-Off

Close Databases

Close Procedure

Release All

Return To Master

Case Xwd2opt = 1

\* -- Patient in room 1 bed A

Locate For Prm ='1'.And. Pbed ='A'.And. Pward ='2'

Ptregno = Xpt1regno

Ptselect =;

Pward -[' '+Prm]-[' '+Pbed]-[' '+Xpt1]

Ourpt = Xpt1

Ptfmpssn = Xpt1fmpssn

If Ourpt = "

@ 24,9 Say "Sorry No Patient In That Bed -- "

@ 24,41 Say "Please Press Any Key To Continue"

Set Console Off

Wait

Set Console On

Loop

Endif

```

If Omodule = "D"
  Do B:Doctor
  Return
Else
  Do B:Nurse
  Return
Endif
Return

```

```

Case Xwd2opt = 2
* -- Patient in room 1 bed B
Locate For Prm = '1'.And. Pbed = 'B'.And. Pward = '2'
Ptregno = Xpt2regno
Ptselect = ;
Pward -[' '+Prm]-[' '+Pbed]-[' '+Xpt2]
Ourpt = Xpt2
Ptftpssn = Xpt2ftpssn
If Ourpt = " "
  @ 24,9 Say "Sorry No Patient In That Bed -- "
  @ 24,41 Say "Please Press Any Key To Continue"
  Set Console Off
  Wait
  Set Console On
  Loop
Endif
If Omodule = "D"
  Do B:Doctor
  Return
Else
  Do B:Nurse
  Return
Endif
Return

```

```

Case Xwd2opt = 3
* -- Patient in room 2 bed A
Locate For Prm = '2'.And. Pbed = 'A'.And. Pward = '2'
Ptregno = Xpt3regno
Ptselect = ;
Pward -[' '+Prm]-[' '+Pbed]-[' '+Xpt3]
Ourpt = Xpt3
Ptftpssn = Xpt3ftpssn
If Ourpt = " "
  @ 24,9 Say "Sorry No Patient In That Bed -- "
  @ 24,41 Say "Please Press Any Key To Continue"
  Set Console Off
  Wait
  Set Console On
  Loop
Endif

```

```

    If Omodule = "D"
        Do B:Doctor
        Return
    Else
        Do B:Nurse
        Return
    Endif
    Return

Case Xwd2opt = 4
    * -- Patient in room 2 bed B
    Locate For Prm= '2'.And. Pbed= 'B'.And. Pward= '2'
    Ptregno = Xpt4regno
    Ptselect = ;
    Pward -( '      '+Prm)-( '      '+Pbed)-( '      '+Xpt4)
    Ourpt = Xpt4
    Ptfmpssn = Xpt4fmpssn
    If Ourpt = "      "
        @ 24,9 Say "Sorry No Patient In That Bed -- "
        @ 24,41 Say "Please Press Any Key To Continue"
        Set Console Off
        Wait
        Set Console On
        Loop
    Endif
    If Omodule = "D"
        Do B:Doctor
        Return
    Else
        Do B:Nurse
        Return
    Endif
    Return

Case Xwd2opt = 5
    * -- Patient in room 3 bed A
    Locate For Prm= '3'.And. Pbed= 'A'.And. Pward= '2'
    Ptregno = Xpt5regno
    Ptselect = ;
    Pward -( '      '+Prm)-( '      '+Pbed)-( '      '+Xpt5)
    Ourpt = Xpt5
    Ptfmpssn = Xpt5fmpssn
    If Ourpt = "      "
        @ 24,9 Say "Sorry No Patient In That Bed -- "
        @ 24,41 Say "Please Press Any Key To Continue"
        Set Console Off
        Wait
        Set Console On
        Loop
    Endif

```

```

If Omodule = "D"
  Do B:Doctor
  Return
Else
  Do B:Nurse
  Return
Endif
Return

```

```

Case Xwd2opt = 6
  * -- Patient in room 3 bed B
  Locate For Prm= '3'.And. Pbed= 'B'.And. Pward= '2'
  Ptregho = Xpt6regno
  Ptselect = ;
  Pward -( '      '+Prm)-( '      '+Pbed)-( '      '+Xpt6)
  Ourpt = Xpt6
  Ptfmpssn = Xpt6fmpssn
  If Ourpt = "      "
    @ 24,9 Say "Sorry No Patient In That Bed -- "
    @ 24,41 Say "Please Press Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Loop
  Endif
  If Omodule = "D"
    Do B:Doctor
    Return
  Else
    Do B:Nurse
    Return
  Endif
  Return

```

```

Case Xwd2opt = 7
  * -- Master Screen
  Return

Endcase
Release Xwd2opt, Xpt1regno, Xpt2regno, Xpt3regno
Release Xpt5regno, Xpt6regno, Xpt5fmpssn, Xpt6fmpssn
Release Xpt1fmpssn, Xpt2fmpssn, Xpt3fmpssn, Xpt4fmpssn
Release Xpt4regno, Xpt1, Xpt2, Xpt3, Xpt4, Xpt5, Xpt6

```

Enddo



\*\*\*\*\* WARD3.PRG \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
 \* Date: 11 January 1986  
 \* Screen Generated By: The Software Bottling Company  
 \* Of New York, c1985  
 \* Purpose: Displays patients assigned to ward  
 \* 3E, for patient selection.  
 \* Input Files Used: Ward3.Scr and Procfile.Prg  
 \* Output Files Used: Pt\_Info.Dbf  
 \* Calling Routine: Master.Prg  
 \* Routine Called: Doctor or Nurse.Prg  
 \* Modification Date: 3 March 1986

\* -- Screen input program for Ward3 --

Do Setup

Public Xwd3opt,Xpt7,Xpt8,Xpt9,Xpt10,Xpt11,Xpt12  
 Public Xpt7regno,Xpt8regno,Xpt9regno,Xpt10regno  
 Public Xpt11regno,Xpt12regno,Xp11fmpssn,Xp12fmpssn  
 Public Xpt7fmpssn,Xpt8fmpssn,Xpt9fmpssn,Xp10fmpssn

\* -- Store specific data from Dbf file into variable  
 \* -- names --

Use B:Pt\_Info

Locate For Prm = '1' .And. Pbed = 'A' .And. Pward = '3'  
 Xpt7 = Pfname - [' ' +Plname]  
 Xpt7regno = Pregno  
 Xpt7fmpssn = Fmpssn  
 Locate For Prm = '1' .And. Pbed = 'B' .And. Pward = '3'  
 Xpt8 = Pfname - [' ' +Plname]  
 Xpt8regno = Pregno  
 Xpt8fmpssn = Fmpssn  
 Locate For Prm = '2' .And. Pbed = 'A' .And. Pward = '3'  
 Xpt9 = Pfname - [' ' +Plname]  
 Xpt9regno = Pregno  
 Xpt9fmpssn = Fmpssn  
 Locate For Prm = '2' .And. Pbed = 'B' .And. Pward = '3'  
 Xpt10 = Pfname - [' ' +Plname]  
 Xpt10regno = Pregno  
 Xp10fmpssn = Fmpssn  
 Locate For Prm = '3' .And. Pbed = 'A' .And. Pward = '3'  
 Xpt11 = Pfname - [' ' +Plname]  
 Xpt11regno = Pregno  
 Xp11fmpssn = Fmpssn  
 Locate For Prm = '3' .And. Pbed = 'B' .And. Pward = '3'  
 Xpt12 = Pfname - [' ' +Plname]  
 Xpt12regno = Pregno  
 Xp12fmpssn = Fmpssn

Do While .T.

\* -- Screen Display B:Ward3.Scr --

Set Color To W+/B,W+/B

Clear

?? Flash+"S.B:Ward3.Scr/"

Set Color To W+/B,W+/B

Xwd3opt = 7

@ 2,56 Say Date()

@ 2,65 Say Time()

@ 9,39 Say Xpt7

@ 10,39 Say Xpt8

@ 12,39 Say Xpt9

@ 13,39 Say Xpt10

@ 15,39 Say Xpt11

@ 16,39 Say Xpt12

@ 22,3 Say Curuser

@ 22,67 Get Xwd3opt Pict "9" Range 0,7

Read

\* -- Evaluate action based on the option selected --

\* -- Store data from Dbf file into variable names --

Do Case

Case Xwd3opt = 0

\* -- Sign-Off

Close Databases

Close Procedure

Release All

Return To Master

Case Xwd3opt = 1

\* -- Patient in room 1 bed A

Locate For Prm= '1'.And. Pbed= 'A'.And. Pward= '3'

Ptregno = Xpt7regno

Ptselect =;

Pward -[' '+Prm)-[' '+Pbed)-[' '+Xpt7]

Qurpt = Xpt7

Ptfmpssn = Xpt7fmpssn

If Qurpt = "

Wait "Sorry No Patient In That Bed -;

- Please Press A Key To Continue"

Loop

Endif

If Omodule = "D"

Do B:Doctor

Return

```

Else
  Do B:Nurse
  Return
Endif
Return

Case Xwd3opt = 2
* -- Patient in room 1 bed B
Locate For Prm= '1'.And. Pbed= 'B'.And. Pward= '3'
Ptregno = Xpt8regno
Ptselect;
  Pward -[' '+Prm)-[' '+Pbed)-[' '+Xpt8)
Ourpt = Xpt8
Ptfmtssn = Xpt8fmtssn
If Ourpt = " "
  Wait "Sorry No Patient In That Bed -;
    - Please Press A Key To Continue"
  Loop
Endif
If Omodule = "D"
  Do B:Doctor
  Return
Else
  Do B:Nurse
  Return
Endif
Return

Case Xwd3opt = 3
* -- Patient in room 2 bed A
Locate For Prm= '2'.And. Pbed= 'A'.And. Pward= '3'
Ptregno = Xpt9regno
Ptselect =;
  Pward -[' '+Prm)-[' '+Pbed)-[' '+Xpt9)
Ourpt = Xpt9
Ptfmtssn = Xpt9fmtssn
If Ourpt = " "
  Wait "Sorry No Patient In That Bed -;
    - Please Press A Key To Continue"
  Loop
Endif
If Omodule = "D"
  Do B:Doctor
  Return
Else
  Do B:Nurse
  Return
Endif
Return

```

```

Case Xwd3opt = 4
* -- Patient in room 2 bed B
Locate For Prm= '2'.And. Pbed= 'B'.And. Pward= '3'
Ptreyno = Xpt10regno
Ptselect =;
Pward-[' '+Prm]-[' '+Pbed]-[' '+Xpt10]
Ourpt = Xpt10
Ptfrmpssn = Xpt10frmpssn
If Ourpt = " "
Wait "Sorry No Patient In That Bed -;
- Please Press A Key To Continue"
Loop
Endif
If Omodule = "D"
Do B:Doctor
Return
Else
Do B:Nurse
Return
Endif
Return

```

```

Case Xwd3opt = 5
* -- Patient in room 3 bed A
Locate For Prm= '3'.And. Pbed= 'A'.And. Pward= '3'
Ptreyno = Xpt11regno
Ptselect =;
Pward-[' '+Prm]-[' '+Pbed]-[' '+Xpt11]
Ourpt = Xpt11
Ptfrmpssn = Xpt11frmpssn
If Ourpt = " "
Wait "Sorry No Patient In That Bed -;
- Please Press A Key To Continue"
Loop
Endif
If Omodule = "D"
Do B:Doctor
Return
Else
Do B:Nurse
Return
Endif
Return

```

```

Case Xwd3opt = 6
* -- Patient in room 3 bed B
Locate For Prm= '3'.And. Pbed= 'B'.And. Pward= '3'
Ptreyno = Xpt12regno
Ptselect =;
Pward-[' '+Prm]-[' '+Pbed]-[' '+Xpt12]

```

```

    Ourpt = Xpt12
    Ptfmpssn = Xp12fmpssn
    IF Ourpt = "    "
        Wait "Sorry No Patient In That Bed -;
            - Please Press A Key To Continue"
        Loop
    Endif
    If Omodule = "D"
        Do B:Doctor
        Return
    Else
        Do B:Nurse
        Return
    Endif
    Return

Case Xwd3opt = 7
    * -- Master Screen
    Return

Endcase
Release Xwd3opt, Xpt7, Xpt8, Xpt9, Xpt10, Xpt11, Xpt12
Release Xpt7regno, Xpt8regno, Xpt9regno, Xpt10regno
Release Xpt11regno, Xpt12regno, Xp11fmpssn, Xp12fmpssn
Release Xpt7fmpssn, Xpt8fmpssn, Xpt9fmpssn, Xp10fmpssn

Enddo

```

```

**** DOCTOR.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 27 November 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Menu for selecting, viewing or
* modifying the doctor's orders.
* Input Files Used: Doctor.Prg and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Ward2 or Ward3.Prg
* Routine Calls: Doc_menu, Transfer or Discont.Prg
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Doctor --
*
Do Setup
Public Xdocopt,Xmptfmpssn,Dmenu
Dmenu = Space(1)

Do While .T.

    * -- Screen Display A:Doctor.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Doctor.Scr/"
    Set Color To W+/B,W+/B
    Xdocopt = 6
    Do Headings
    @ 22,67 Get Xdocopt Pict "9" Range 0,6
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xdocopt = 0
            * -- Sign-Off
            Close Databases
            Close Procedure
            Release All
            Return To Master

        Case Xdocopt = 1
            * -- Order Entry
            Do B:Doc_Menu
            If Dmenu = "1"
                Loop
            Else

```

```

        Return
    Endif

Case Xdocopt = 2
    * -- Admit / Transfer / Discharge Patient
    Do B:Transfer
    If Dmenu = "1"
        Loop
    Else
        Return
    Endif

Case Xdocopt = 3
    * -- Review Medical Orders
    Clear
    Set Color To W+/B,W+/B
    @ 1,22 Say "Patient Orders For:"
    @ 1,42 Say Ourpt
    @ 3,10 Say "Press -- Ctrl and S -- Keys to Pause "
    @ 3,47 Say "The Scrolling If Necessary"
    Use B:Orders
    Store "" + Ptfmpssn + "" To Xmptfmpssn
    Report Form B:Ord For Fmpssn = &Xmptfmpssn .And.;
        Module # 'N'
    Wait
    Loop

Case Xdocopt = 4
    * -- Print Medical Orders
    @ 24,0 Say "Turn On Your Printer, "
    @ 24,22 Say "Then Hit Any Key To Print"
    Set Console Off
    Wait
    Set Console On
    Clear
    @ 12,30 Say "Printing, Please Wait"
    Set Console Off
    Set Device To Print
    @ 1,22 Say "Patient Orders For:"
    @ 1,42 Say Ourpt
    Set Device To Screen
    Use B:Orders
    Store "" + Ptfmpssn + "" To Xmptfmpssn
    Report Form B:Ord Noeject To Print For;
        Fmpssn = &Xmptfmpssn .And. Module # 'N'
    Set Console On
    @ 24,0 Say "Finished Printing, "
    @ 24,19 Say "Hit Any Key To Continue"
    Set Console Off
    Wait

```

```

Set Console On
Loop

Case Xdocopt = 5
  * -- Discontinue An Order
  Do B:Discont
  If Dmenu = "1"
    Loop
  Else
    Return
  Endif

Case Xdocopt = 6
  * -- Master Screen
  Return

Endcase
Release Xdocopt,Xmptfmpssn

Enddo

```



\*\*\*\* DOC\_MENU.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 27 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Menu of ten order categories for  
\* doctor to choose from.  
\* Input Files Used: Doc\_Menu.Scr and Drproc.Prg  
\* Output Files Used: None  
\* Calling Routine: Doctor.Prg  
\* Routine Called: Activity,Diet,IVA,Lab,Monitor,Pham1  
\* Xray,Lung,US or Routine.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Doc\_Menu --

Do Setup  
Public Xdocmenopt

Do While .T.

\* -- Screen Display A:Doc\_Menu.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Doc\_Menu.Scr/"  
Set Color To W+/B,W+/B  
Xdocmenopt = 11  
Do Headings  
@ 22,66 Get Xdocmenopt Pict "99" Range 0,12  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xdocmenopt = 0

\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xdocmenopt = 1

Do B:Activity  
If Dmenu = "1"  
Loop  
Else

Return  
Endif

Case Xdocmenopt = 2  
Do B:Diet  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

Case Xdocmenopt = 3  
Do B:IVA  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

Case Xdocmenopt = 4  
Do B:Lab  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

Case Xdocmenopt = 5  
Do B:Monitor  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

Case Xdocmenopt = 6  
Do B:Pham1  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

Case Xdocmenopt = 7  
Do B:Xray  
If Dmenu = "1"  
Loop  
Else  
Return  
Endif

```

Case Xdocmenopt = 8
  Do B:Lung
  If Dmenu = "1"
    Loop
  Else
    Return
  Endif

Case Xdocmenopt = 9
  Do B:US
  If Dmenu = "1"
    Loop
  Else
    Return
  Endif

Case Xdocmenopt = 10
  Do B:Routine
  If Dmenu = "1"
    Loop
  Else
    Return
  Endif

Case Xdocmenopt = 11
  * -- Doctor's Master Screen
  Dmenu = "1"
  Return

Case Xdocmenopt = 12
  * -- Master Screen
  Store ' ' To Dmenu
  Return

Endcase
Release Xdocmenopt

Enddo

```

\*\*\*\* ACTIVITY.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 29 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Determine activity orders of the  
\* patient.  
\* Input Files Used: Activity.Scr and Procfile.Prg  
\* Output Files Used: Orders.Dbf  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: Time.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Activity --

Do Setup  
Public Xactopt

Do While .T.

\* -- Screen Display A:Activity.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Activity.Scr/"  
Set Color To W+/B,W+/B  
Xactopt = 13  
Do Headings  
Do Startup  
@ 22,66 Get Xactopt Pict "99" Range 0,14  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xactopt = 0  
\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xactopt = 1  
Morder = "Ambulate ad lib"  
Do Replaord  
Loop

```

Case Xactopt = 2
  Morder = "Ambulate w/ Assistance"
  Do B:Time

  Do Case
    Case (Timeopt < 5 .Or. Timeopt = 41)
      * -- No precise frequency given
      Passdata = "Q51 18"
      Ptpoint = 0
    Case (Timeopt > 4 .And. Timeopt < 22)
      * -- X 1
      Passdata = "Q51 11"
      Ptpoint = 2
    Case (Timeopt > 21 .And. Timeopt < 25)
      * -- X 2 or BID
      Passdata = "Q51 12"
      Ptpoint = 4
    Case (Timeopt > 24 .And. Timeopt < 31)
      * -- X 3 or TID
      Passdata = "Q51 13"
      Ptpoint = 6
    Case (Timeopt > 30 .And. Timeopt < 34)
      * -- X 4 or QID
      Passdata = "Q51 14"
      Ptpoint = 8
    Case (Timeopt = 34 .Or. Timeopt = 35)
      * -- X 6 or Q4h
      Passdata = "Q51 15"
      Ptpoint = 12
    Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- X 12 or Q2h
      Passdata = "Q51 16"
      Ptpoint = 24
    Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- X 24 or Q1h
      Passdata = "Q51 17"
      Ptpoint = 48
  Endcase

```

```

Do Replaord
Loop

```

```

Case Xactopt = 3
  Morder = "Strict Bedrest"
  Do Replaord
  Loop

```

```

Case Xactopt = 4
  Morder = "Bedrest w/ BRP"

```

Do Replaord  
Loop

Case Xactopt = 5  
Morder = "Bedside Commode"  
Do Replaord  
Loop

Case Xactopt = 6  
Morder = "OOB to Stretcher w/ Assist"  
Do B:Time

Do Case  
Case (Timeopt < 25 .Or. Timeopt = 41)  
\* -- Less than x 3 or TID  
Passdata = "Q51 2"  
Ptpoint = 0  
Case (Timeopt > 24 .And. Timeopt < 34)  
\* -- X 3 or less than Q4h (x 6)  
Passdata = "Q51 3"  
Ptpoint = 2  
Case (Timeopt = 34 .Or. Timeopt = 35)  
\* -- X 6 or Q4h  
Passdata = "Q51 4"  
Ptpoint = 4  
Case (Timeopt = 36 .Or. Timeopt = 37)  
\* -- X 12 or Q2h  
Passdata = "Q51 5"  
Ptpoint = 8  
Case (Timeopt = 38 .Or. Timeopt = 39)  
\* -- X 24 or Q1h  
Passdata = "Q51 6"  
Ptpoint = 16  
Endcase

Do Replaord  
Loop

Case Xactopt = 7  
Morder = "Dangle Legs"  
Do B:Time  
Do Replaord  
Loop

Case Xactopt = 8  
Morder = "Keep on Back"  
Do Replaord  
Loop

```

Case Xactopt = 9
  Morder = "May Shower"
  Do Replaord
  Loop

Case Xactopt = 10
  Morder = "Turn Patient"
  Do B:Time
  Do Replaord
  Loop

Case Xactopt = 11
  Morder = "Turning Frame"
  Do B:Time

  Do Case
    Case [Timeopt < 36 .Or. Timeopt = 41]
      * -- Less than Q2h
      Passdata = "Q25 1"
      Ptpoint = 0
    Case [Timeopt = 36 .Or. Timeopt = 37]
      * -- Q2h or x 12
      Passdata = "Q25 2"
      Ptpoint = 14
    Case [Timeopt = 38 .Or. Timeopt = 39]
      * -- Q1h or x 24
      Passdata = "Q25 3"
      Ptpoint = 28
  Endcase

  Do Replaord
  Loop

Case Xactopt = 12
  Morder = "Up in Chair w/ Assist"
  Do B:Time

  Do Case
    Case [Timeopt < 25 .Or. Timeopt = 41]
      * -- Less than x 3 or TID
      Passdata = "Q51 1"
      Ptpoint = 0
    Case [Timeopt > 24 .And. Timeopt < 34]
      * -- X 3 or less than Q4h (x 6)
      Passdata = "Q51 7"
      Ptpoint = 2
    Case [Timeopt = 34 .Or. Timeopt = 35]
      * -- X 6 or Q4h
      Passdata = "Q51 8"
      Ptpoint = 4
  Endcase

```

```

Case [Timeopt = 36 .Or. Timeopt = 37]
* -- X 12 or Q2h
Passdata = "Q51 9"
Ptpoint = 8
Case [Timeopt = 38 .Or. Timeopt = 39]
* -- X 24 or Q1h
Passdata = "Q51 10"
Ptpoint = 16
Endcase

```

```

Do Replaord
Loop

```

```

Case Xactopt = 13
* -- Doctor's Order Screen
Dmenu = '1'
Return

```

```

Case Xactopt = 14
* -- Master Screen
Dmenu = ' '
Return

```

```

Endcase
Release Xactopt

```

```

Enddo

```



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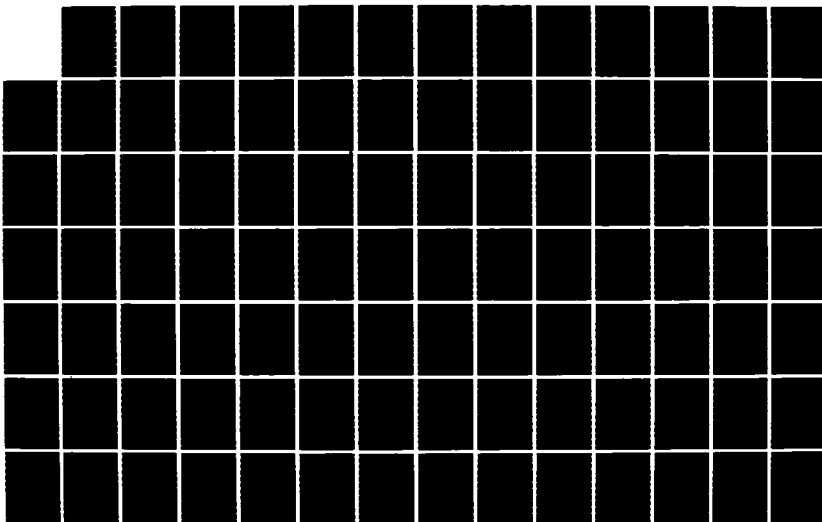
A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION(U) NAVAL  
POSTGRADUATE SCHOOL MONTEREY CA G R HARNEY MAR 86

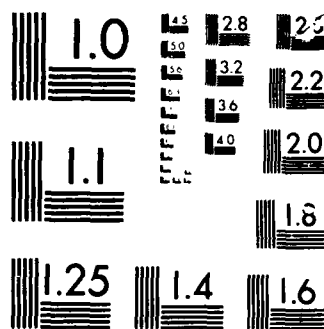
3/3

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F/G 5/1

NL





\*\*\*\* TIME.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 29 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Determine the time of orders for  
\* the patient.  
\* Input Files Used: Time.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: All Orders and Ncaredb.Dbf modules.  
\* Routine Called: Timehelp.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Time --

Do Setup  
Public Timeopt,Xtime  
Xtime = Space(4)

Do While .T.

\* -- Screen Display A:Time.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Time.Scr/"  
Set Color To W+/B,W+/B  
Timeopt = 41  
Do Headings  
@ 22,66 Get Timeopt Pict "99" Range 1,41  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Timeopt = 1  
Ofreq = "PRN"  
Return

Case Timeopt = 2  
Ofreq = "Q 1-2 Hr PRN"  
Return

Case Timeopt = 3  
Ofreq = "Q 2-3 Hr PRN"  
Return

```

Case Timeopt = 4
  Ofreq = "Q 3-4 Hr PRN"
  Return

Case Timeopt = 5
  Ofreq = "On Call"
  Todayonly = "I"
  Return

Case Timeopt = 6
  Ofreq = "QD"
  Return

Case Timeopt = 7
  Ofreq = "HS"
  Return

Case Timeopt = 8
  Ofreq = "x 1"
  Todayonly = "I"
  Return

Case Timeopt = 9
  * -- Today @ ----
  @ 17,8 Get Xtime Pict "9999"
  Read
  Ofreq = "Today @ " + Xtime
  Todayonly = "I"
  Return

Case Timeopt = 10
  Ofreq = "Daily @ 0200"
  Return

Case Timeopt = 11
  Ofreq = "Daily @ 0400"
  Return

Case Timeopt = 12
  Ofreq = "Daily @ 0600"
  Return

Case Timeopt = 13
  Ofreq = "Daily @ 0800"
  Return

Case Timeopt = 14
  Ofreq = "Daily @ 1000"
  Return

```

Case Timeopt = 15  
Ofreq = "Daily @ 1200"  
Return

Case Timeopt = 16  
Ofreq = "Daily @ 1400"  
Return

Case Timeopt = 17  
Ofreq = "Daily @ 1600"  
Return

Case Timeopt = 18  
Ofreq = "Daily @ 1800"  
Return

Case Timeopt = 19  
Ofreq = "Daily @ 2000"  
Return

Case Timeopt = 20  
Ofreq = "Daily @ 2200"  
Return

Case Timeopt = 21  
Ofreq = "Daily @ 2400"  
Return

Case Timeopt = 22  
Ofreq = "BID"  
Return

Case Timeopt = 23  
Ofreq = "Q 12 Hr"  
Return

Case Timeopt = 24  
Ofreq = "x 2"  
Todayonly = "I"  
Return

Case Timeopt = 25  
Ofreq = "TID"  
Return

Case Timeopt = 26  
Ofreq = "AC"  
Return

Case Timeopt = 27  
Ofreq = "PC"  
Return

Case Timeopt = 28  
Ofreq = "Q 8 Hr"  
Return

Case Timeopt = 29  
Ofreq = "x 3"  
Todayonly = "I"  
Return

Case Timeopt = 30  
Ofreq = "Q Shift"  
Return

Case Timeopt = 31  
Ofreq = "QID"  
Return

Case Timeopt = 32  
Ofreq = "Q 6 Hr"  
Return

Case Timeopt = 33  
Ofreq = "x 4"  
Todayonly = "I"  
Return

Case Timeopt = 34  
Ofreq = "Q 4 Hr"  
Return

Case Timeopt = 35  
Ofreq = "x 6"  
Todayonly = "I"  
Return

Case Timeopt = 36  
Ofreq = "Q 2 Hr"  
Return

Case Timeopt = 37  
Ofreq = "x 12"  
Todayonly = "I"  
Return

Case Timeopt = 38  
Ofreq = "Q 1 Hr"  
Return

Case Timeopt = 39  
Ofreq = "x 24"  
Todayonly = "I"  
Return

Case Timeopt = 40  
\* -- Help  
Do B:Timehelp  
Loop

Case Timeopt = 41  
\* -- Return to Calling Screen  
Return

Endcase  
Release Xtime

Enddo

```

**** TIMEHELP.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 1 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Brief on-line help facility for
* Time.Prg.
* Input Files Used: Timehelp.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Time.Prg
* Routine Called: None
* Modification Date: 26 January 1986
*
* -- Screen Input Program For Timehelp --
*
Do Setup

Do While .T.

    * -- Screen Display A:Timehelp.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Timehelp.Scr/"
    @ 24,0
    @ 24,37 "Press Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Return

Enddo

```



\*\*\*\* DIET.PRГ \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 27 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Determine the diet orders of the  
\* patient.  
\* Input Files Used: Diet.Scr and Procfile.Prg  
\* Output Files Used: Orders.Dbf  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: Time.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Diet --

Do Setup  
Public Xdietopt

Do While .T.

\* -- Screen Display A:Diet.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Diet.Scr/"  
Set Color To W+/B,W+/B  
Xdietopt = 19  
Do Headings  
Do Startup  
@ 22,66 Get Xdietopt Pict "99" Range 0,20  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xdietopt = 0

\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xdietopt = 1

Morder = "Diet As Tolerated"  
Do Replaord  
Loop

Case Xdietopt = 2  
Morder = "Clear Liquids Diet"  
Do Replaord  
Loop

Case Xdietopt = 3  
Morder = "Diabetic Diet"  
Do Replaord  
Loop

Case Xdietopt = 4  
Morder = "Fat-controlled Diet"  
Do Replaord  
Loop

Case Xdietopt = 5  
Morder = "Full Liquid Diet"  
Do Replaord  
Loop

Case Xdietopt = 6  
Morder = "Infant/Neonat Bottle x1"  
Passdata = "Q29 1"  
Ptpoint = 2  
Do Replaord  
Loop

Case Xdietopt = 7  
Morder = "Infant/Neonat Bottle x6"  
Passdata = "Q29 2"  
Ptpoint = 12  
Do Replaord  
Loop

Case Xdietopt = 8  
Morder = "Infant/Neonat Bottle x12"  
Passdata = "Q29 3"  
Ptpoint = 24  
Do Replaord  
Loop

Case Xdietopt = 9  
Morder = "Mechanical Soft Diet"  
Do Replaord  
Loop

Case Xdietopt = 10  
Morder = "Na Controlled Diet"  
Do Replaord  
Loop

```

Case Xdietopt = 11
  Morder = "NPO"
  Do Replaord
  Loop

Case Xdietopt = 12
  Morder = "NPO p 2400"
  Do Replaord
  Loop

Case Xdietopt = 13
  Morder = "NPO w/ Ice Chips"
  Do Replaord
  Loop

Case Xdietopt = 14
  Morder = "Regular Diet"
  Do Replaord
  Loop

Case Xdietopt = 15
  Morder = "Renal/Liver Disease Diet"
  Do Replaord
  Loop

Case Xdietopt = 16
  Morder = "I & A Diet"
  Do Replaord
  Loop

Case Xdietopt = 17
  Morder = "Continuous Tube Feedings"
  Do B:Time

Do Case
  Case (Timeopt < 6 .Or. Timeopt = 41)
    * -- Less than 1 bag per 24 hours
    Passdata = "Q27 1"
    Ptpoint = 0
  Case (Timeopt > 5 .And. Timeopt < 22)
    * -- 1 bag per 24 hours
    Passdata = "Q27 2"
    Ptpoint = 2
  Case (Timeopt > 21 .And. Timeopt < 25)
    * -- 2 bags per 24 hours
    Passdata = "Q27 3"
    Ptpoint = 4
  Case (Timeopt > 24 .And. Timeopt < 31)
    * -- 3 bags per 24 hours

```

```

        Passdata = "Q27 4"
        Ptpoint = 6
    Case [Timeopt > 30 .And. Timeopt < 34]
        * -- 4 bags per 24 hours
        Passdata = "Q27 5"
        Ptpoint = 8
    Case [Timeopt = 34 .Or. Timeopt = 35]
        * -- 6 bags per 24 hours
        Passdata = "Q27 6"
        Ptpoint = 12
    Case [Timeopt = 36 .Or. Timeopt = 37]
        * -- 12 bags per 24 hours
        Passdata = "Q27 7"
        Ptpoint = 24
    Case [Timeopt = 38 .Or. Timeopt = 39]
        * -- 24 bags per 24 hours
        Passdata = "Q27 8"
        Ptpoint = 48
    Endcase

Do Replaord
Loop

Case Xdietopt = 18
Morder = "Bolus Tube Feedings"
Do B:Time

Do Case
    Case [Timeopt < 34 .Or. Timeopt = 41]
        * -- Less than Q4h or x 6
        Passdata = "Q27 9"
        Ptpoint = 0
    Case [Timeopt = 34 .Or. Timeopt = 35]
        * -- Q4h or x 6
        Passdata = "Q27 10"
        Ptpoint = 5
    Case [Timeopt = 36 .Or. Timeopt = 37]
        * -- Q2h or x 12
        Passdata = "Q27 11"
        Ptpoint = 10
    Case [Timeopt = 38 .Or. Timeopt = 39]
        * -- Q1h or x 24
        Passdata = "Q27 12"
        Ptpoint = 20
    Endcase

Do Replaord
Loop

```

```
Case Xdietopty = 19
* -- Doctor's Order Screen
Dmenu = "1"
Return
```

```
Case Xdietopty = 20
* -- Master Screen
Dmenu = " "
Return
```

```
Endcase
Release Xdietopty
```

```
Enddo
```

\*\*\*\* IVA.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 8 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Determine first stage IU needs of  
\* the patient.  
\* Input Files Used: IVA.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: IUB.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For IVA --  
\*

Do Setup  
Public Xivaopt,Morder1

Do While .T.

\* -- Screen Display A:IVA.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:IVA.Scr/"  
Set Color To W+/B,W+/B  
Xivaopt = 09  
Do Headings  
Do Startup  
@ 22,66 Get Xivaopt Pict "99" Range 0,10  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xivaopt = 0  
\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xivaopt = 1  
Morder1 = "Start IU of"  
Passdata = "Q30 1"  
Ptpoint = 2  
Todayonly = "I"

```

    Do B:IVB
    Loop

Case Xivaopt = 2
    Morder1 = "Alternate IV w/"
    Do B:IVB
    Loop

Case Xivaopt = 3
    Morder1 = "Follow IV w/"
    Do B:IVB
    Loop

Case Xivaopt = 4
    Morder1 = "Interrupt IV for"
    Do B:IVB
    Loop

Case Xivaopt = 5
    Morder1 = "Start 2nd IV of"
    Passdata = "Q30 1"
    Ptpoint = 2
    Todayonly = "I"
    Do B:IVB
    Loop

Case Xivaopt = 6
    Morder = "Discontinue IV"
    Do Replaord
    Loop

Case Xivaopt = 7
    Morder = "Heparin Lock"
    Passdata = "Q73 1"
    Ptpoint = 4
    Do Replaord
    Loop

Case Xivaopt = 8
    Morder = "Multilumen Line"
    Passdata = "Q72 3"
    Ptpoint = 8
    Do Replaord
    Loop

Case Xivaopt = 9
    * -- Doctor's Order Screen
    Dmenu = "1"
    Return

```

Case Xivaopt = 10  
\* -- Master Screen  
Dmenu = " "  
Return

Endcase  
Release Xivaopt

Enddo



```

**** IUB.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 8 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: The doctor selects an IV solution
* for the patient.
* Input Files Used: IUB.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: IVA.Prg
* Routine Called: None
* Modification Date: 19 February 1986
*
* -- Screen Input Program For IUB --
*
Do Setup
Public Xivbopt,Blood
Blood = .F.

Do While .T.

    * -- Screen Display A:IUB.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:IUB.Scr/"
    Set Color To W+/B,W+/B
    Xivbopt = 1
    Do Headings
    @ 22,67 Get Xivbopt Pict "9" Range 1,8
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xivbopt = 1
            Morder = Morder1 + " DS/.45 NaCl"
            Do B:IUC
            Return

        Case Xivbopt = 2
            Morder = Morder1 + " RL"
            Do B:IUC
            Return

        Case Xivbopt = 3
            Morder = Morder1 + " DSRL"

```

```

Do B:IUC
Return

Case Xivbopt = 4
Morder = Morder1 + " DSW"
Do B:IUC
Return

Case Xivbopt = 5
Morder = Morder1 + " NS"
Do B:IUC
Return

Case Xivbopt = 6
Morder = Morder1 + " DSNS"
Do B:IUC
Return

Case Xivbopt = 7
Morder = Morder1 + " Whole Bld"
Blood = .T.
Do B:IUC
Return

Case Xivbopt = 8
Morder = Morder1 + " Packed Cells"
Blood = .T.
Do B:IUC
Return

Endcase
Release Xivbopt

Enddo

```

\*\*\*\*\* IVC.PRG \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 8 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Determine IV infusion rate for  
\* patient orders.  
\* Input Files Used: IVC.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: IVB.Prg  
\* Routine Called: None  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For IVC --

Do Setup  
Public Xivcopt

Do While .I.

\* -- Screen Display A:IVC.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:IVC.Scr/"  
Set Color To W+/B,W+/B  
Xivcopt = 6  
Do Headings  
@ 22,67 Get Xivcopt Pict "9" Range 1,8  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xivcopt = 1  
Ofreq = "Infuse o 30M"  
If Blood = .I.  
Passdata = "Q75 1"  
Ptpoint = Ptpoint + 2  
Else  
Passdata = "Q72 3"  
Ptpoint = Ptpoint + 8  
Endif  
Do Replaord  
Return

Case Xivcopt = 2  
Ofreq = "Infuse o 1Hr"

```

If Blood = .T.
  Passdata = "Q75 1"
  Ptpoint = Ptpoint + 2
Else
  Passdata = "Q72 3"
  Ptpoint = Ptpoint + 8
Endif
Do Replaord
Return

Case Xivcopt = 3
  Ofreq = "Infuse o 2Hr"
  If Blood = .T.
    Passdata = "Q75 1"
    Ptpoint = Ptpoint + 2
  Else
    Passdata = "Q72 3"
    Ptpoint = Ptpoint + 8
  Endif
  Do Replaord
  Return

Case Xivcopt = 4
  Ofreq = "Infuse o 4Hr"
  If Blood = .T.
    Passdata = "Q75 1"
    Ptpoint = Ptpoint + 2
  Else
    Passdata = "Q72 3"
    Ptpoint = Ptpoint + 8
  Endif
  Do Replaord
  Return

Case Xivcopt = 5
  Ofreq = "Infuse o 6Hr"
  Passdata = "Q72 2"
  Ptpoint = Ptpoint + 6
  Do Replaord
  Return

Case Xivcopt = 6
  Ofreq = "Infuse o 8Hr"
  Passdata = "Q72 2"
  Ptpoint = Ptpoint + 6
  Do Replaord
  Return

Case Xivcopt = 7
  Ofreq = "Infuse o 12H"

```

Passdata = "Q72 1"  
Ptpoint = Ptpoint + 4  
Do Replaord  
Return

Case Xivcopt = 8  
Ofreq = "Infuse o 24H"  
Passdata = "Q72 1"  
Ptpoint = Ptpoint + 4  
Do Replaord  
Return

Endcase  
Release Xivcopt,Blood

Enddo

```

***** LAB.PRg *****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 8 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Determine laboratory orders of the
* patient.
* Input Files Used: Lab.Scr and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Doc_Menu.Prg
* Routine Called: Time.Prg
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Lab --
*
Do Setup
Public Xlabopt

Do While .T.

    * -- Screen Display A:Lab.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Lab.Scr/"
    Set Color To W+/B,W+/B
    Xlabopt = 32
    Do Headings
    Do Startup
    @ 22,66 Get Xlabopt Pict "99" Range 0,33
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xlabopt = 0
            * -- Sign-Off
            Close Databases
            Close Procedure
            Release All
            Return To Master

        Case Xlabopt = 1
            Morder = "Bilirubin"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

```

Case Xlabopt = 2

Morder = "BUN"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 3

Morder = "Calcium"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 4

Morder = "Cloride"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 5

Morder = "CO2"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 6

Morder = "Creatinine"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 7

Morder = "Glucose"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 8

Morder = "Phosphate"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 9  
Morder = "Potassium"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 10  
Morder = "Sodium"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 11  
Morder = "Uric Acid"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 12  
Morder = "Amylase"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 13  
Morder = "CPK"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 14  
Morder = "LDH"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop

Case Xlabopt = 15  
Morder = "SGOT"  
Do B:Time  
Do Labcount  
Do Replaord  
Loop



Case Xlabopt = 16

Morder = "SGPT"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 17

Morder = "CBC"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 18

Morder = "Platelets"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 19

Morder = "Protime"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 20

Morder = "Sed Rate"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 21

Morder = "ABO & Rh"

Do B:Time

Do Labcount

Do Replaord

Loop

Case Xlabopt = 22

Morder = "ABG [from A-line]"

Do B:Time

Do Labcount

Do Replaord

Loop

```

Case Xlabopt = 23
  Morder = "ABG [stick]"
  Do B:Time

  Do Case
    Case [Xtimeopt < 25 .Or. Xtimeopt = 41]
      * -- Less than x 3 or IID
      Passdata = "Q45 1"
      Ptpoint = 0
    Case [Xtimeopt > 24 .And. Xtimeopt < 34]
      * -- X 3 [IID] or less than Q4h [x 6]
      Passdata = "Q45 2"
      Ptpoint = 2
    Case [Xtimeopt = 34 .Or. Xtimeopt = 35]
      * -- Q4h or x 6
      Passdata = "Q45 3"
      Ptpoint = 4
    Case [Xtimeopt = 36 .Or. Xtimeopt = 37]
      * -- Q2h or x 12
      Passdata = "Q45 4"
      Ptpoint = 8
    Case [Xtimeopt = 38 .Or. Xtimeopt = 39]
      * -- Q1h or x 24
      Passdata = "Q45 5"
      Ptpoint = 16
  Endcase

  Do Replaord
  Loop

```

```

Case Xlabopt = 24
  Morder = "Bld Cultures"
  Do B:Time

  Do Case
    Case [Xtimeopt < 25 .Or. Xtimeopt = 41]
      * -- Less than x 3 or IID
      Passdata = "Q46 1"
      Ptpoint = 0
    Case [Xtimeopt > 24 .And. Xtimeopt < 34]
      * -- X 3 [IID] or less than Q4h [x 6]
      Passdata = "Q46 2"
      Ptpoint = 2
    Case [Xtimeopt = 34 .Or. Xtimeopt = 35]
      * -- Q4h or x 6
      Passdata = "Q46 3"
      Ptpoint = 4
    Case [Xtimeopt = 36 .Or. Xtimeopt = 37]
      * -- Q2h or x 12
      Passdata = "Q46 4"

```

```

        Ptpoint = 8
        Case (Xtimeopt = 38 .Or. Xtimeopt = 39)
            * -- Q1h or x 24
            Passdata = "Q46 S"
            Ptpoint = 16
        Endcase

        Do Replaord
        Loop

        Case Xlabopt = 25
            Morder = "Culture & Sen"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

        Case Xlabopt = 26
            Morder = "Cold Agglutins"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

        Case Xlabopt = 27
            Morder = "HCG"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

        Case Xlabopt = 28
            Morder = "Occ Bld in Stools"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

        Case Xlabopt = 29
            Morder = "RPR"
            Do B:Time
            Do Labcount
            Do Replaord
            Loop

        Case Xlabopt = 30
            Morder = "SMA 6"
            Do B:Time
            Do Labcount

```

```

Do Replaord
Loop

Case Xlabopt = 31
  Morder = "UA"
  Do B:Time
  Do Labcount
  Do Replaord
  Loop

Case Xlabopt = 32
  * -- Doctor's Order Screen
  Dmenu = '1'
  Return

Case Xactopt = 33
  * -- Master Screen
  Dmenu = ''
  Return

Endcase
Release Xlabopt

Enddo

```

```

**** LUNG.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 29 November 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Menu providing respiratory therapy
* options.
* Input Files Used: Lung.Scr and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Doc_Menu.Prg
* Routine Called: Time.Prg
* Modification Date: 28 January 1986
*
* -- Screen Input Program For Lung --
*
Do Setup
Public Xlungopt,Xlitteropt,Xlitter

Do While .T.

    * -- Screen Display A:Lung.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Lung.Scr/"
    Set Color To W+/B,W+/B
    Xlungopt = 14
    Do Headings
    Do Startup
    @ 21,66 Get Xlungopt Pict "99" Range 0,15
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xlungopt = 0
            * -- Sign-Off
            Close Databases
            Close Procedure
            Release All
            Return To Master

        Case Xlungopt = 1
            Morder = "Chest Pulmonary Therapy"
            Do B:Time

        Do Case
            Case (Timeopt < 22 .Or. Timeopt = 41)

```

```

      * -- Less than BID or x 2
      Passdata = "Q68 1"
      Ptpoint = 0
    Case (Timeopt > 21 .And. Timeopt < 25)
      * -- BID or x 2
      Passdata = "Q68 2"
      Ptpoint = 2
    Case (Timeopt > 24 .And. Timeopt < 31)
      * -- TID or x 3
      Passdata = "Q68 3"
      Ptpoint = 3
    Case (Timeopt > 30 .And. Timeopt < 34)
      * -- QID or x 4
      Passdata = "Q68 4"
      Ptpoint = 4
    Case (Timeopt = 34 .Or. Timeopt = 35)
      * -- Q4h or x 6
      Passdata = "Q68 5"
      Ptpoint = 6
    Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- Q2h or x 12
      Passdata = "Q68 6"
      Ptpoint = 12
    Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- Q1h or x 24
      Passdata = "Q68 7"
      Ptpoint = 24

```

Endcase

Do Replaord  
Loop

```

Case Xlungopt = 2
  Morder = "Cough & Deep Breath"
  Do B:Time
  Do Cough
  Do Replaord
  Loop

```

```

Case Xlungopt = 3
  Morder = "Incentive Spirometer"
  Do B:Time

```

```

Do Case
  Case (Timeopt < 31 .Or. Timeopt = 41)
    * -- Less than Q4h or x 6
    Passdata = "Q64 1"
    Ptpoint = 0
  Case (Timeopt = 34 .Or. Timeopt = 35)
    * -- Q4h or x 6

```

```

    Passdata = "Q64 2"
    Ptpoint = 2
    Case (Timeopt = 36 .Or. Timeopt = 37)
        * -- Q2h or x 12
        Passdata = "Q64 3"
        Ptpoint = 4
    Case (Timeopt = 38 .Or. Timeopt = 39)
        * -- Q1h or x 24
        Passdata = "Q64 4"
        Ptpoint = 8
    Endcase

    Do Replaord
    Loop

Case Xlungopt = 4
Morder = 'IPPB"
Do B:Time

Do Case
    Case (Timeopt < 22 .Or. Timeopt = 41)
        * -- Less than BID or x 2
        Passdata = "Q66 1"
        Ptpoint = 0
    Case (Timeopt > 21 .And. Timeopt < 25)
        * -- BID or x 2
        Passdata = "Q66 2"
        Ptpoint = 2
    Case (Timeopt > 24 .And. Timeopt < 31)
        * -- TID or x 3
        Passdata = "Q66 3"
        Ptpoint = 3
    Case (Timeopt > 30 .And. Timeopt < 34)
        * -- QID or x 4
        Passdata = "Q66 4"
        Ptpoint = 4
    Case (Timeopt = 34 .Or. Timeopt = 35)
        * -- Q4h or x 6
        Passdata = "Q66 5"
        Ptpoint = 6
    Case (Timeopt = 36 .Or. Timeopt = 37)
        * -- Q2h or x 12
        Passdata = "Q66 6"
        Ptpoint = 12
    Case (Timeopt = 38 .Or. Timeopt = 39)
        * -- Q1h or x 24
        Passdata = "Q66 7"
        Ptpoint = 24
    Endcase

```

Do Replaord  
Loop

Case Xlungopt = 5  
Morder = "Suctioning"  
Do B:Time

Do Case  
Case [Timeopt < 34 .Or. Timeopt = 41]  
\* -- Less than Q4h or x 6  
Passdata = "Q69 1"  
Ptpoint = 0  
Case [Timeopt = 34 .Or. Timeopt = 35]  
\* -- Q4h or x 6  
Passdata = "Q69 2"  
Ptpoint = 2  
Case [Timeopt = 36 .Or. Timeopt = 37]  
\* -- Q2h or x 12  
Passdata = "Q68 3"  
Ptpoint = 4  
Case [Timeopt = 38 .Or. Timeopt = 39]  
\* -- Q1h or x 24  
Passdata = "Q68 4"  
Ptpoint = 8  
Endcase

Do Replaord  
Loop

Case Xlungopt = 6  
Morder = "Trach Care"  
Do B:Time

Do Case  
Case [Timeopt < 25 .Or. Timeopt = 41]  
\* -- Less than TID or x 3  
Passdata = "Q70 1"  
Ptpoint = 0  
Case [Timeopt > 24 .And. Timeopt < 34]  
\* -- TID (x 3) or less than Q4h (x 6)  
Passdata = "Q70 2"  
Ptpoint = 4  
Case [Timeopt = 34 .Or. Timeopt = 35]  
\* -- Q4h or x 6  
Passdata = "Q70 3"  
Ptpoint = 8  
Case [Timeopt = 36 .Or. Timeopt = 37]  
\* -- Q2h or x 12  
Passdata = "Q70 4"  
Ptpoint = 16



```

      Case (Timeopt = 38 .Or. Timeopt = 39)
        * -- Q1h or x 24
        Passdata = "Q70 5"
        Ptpoint = 32
      Endcase

      Do Replaord
      Loop

      Case Xlungopt = 7
        Morder = "Ventilator"
        Passdata = "Q71 1"
        Ptpoint = 10
        Do Replaord
        Loop

      Case Xlungopt = 8
        Morder = "Wean from Ventilator"
        Do B:Time
        Do Replaord
        Loop

      Case Xlungopt = 9
        Do Liter
        Morder = "Croup Tent " + Xliter
        Do B:Time
        Passdata = "Q67 1"
        Ptpoint = 8
        Do Replaord
        Loop

      Case Xlungopt = 10
        Do Liter
        Morder = "Mask " + Xliter
        Do B:Time
        Passdata = "Q63 1"
        Ptpoint = 2
        Do Replaord
        Loop

      Case Xlungopt = 11
        Do Liter
        Morder = "Mist Tent " + Xliter
        Do B:Time
        Passdata = "Q67 2"
        Ptpoint = 8
        Do Replaord
        Loop

```

```

Case Xlungopt = 12
  Do Liter
  Morder = "Nasal Prongs " + Xliter
  Do B:Time
  Passdata = "Q63 1"
  Ptpoint = 2
  Do Replaord
  Loop

Case Xlungopt = 13
  Do Liter
  Morder = "Oxyhood " + Xliter
  Do B:Time
  Passdata = "Q63 2"
  Ptpoint = 2
  Do Replaord
  Loop

Case Xlungopt = 14
  * -- Doctor's Order Screen
  Dmenu = '1'
  Return

Case Xlungopt = 15
  * -- Master Screen
  Dmenu = ''
  Return

Endcase
Release Xlungopt,Xliteropt,Xliter

Enddo

```

\*\*\*\*\* MONITOR.PRG \*\*\*\*\*

• Author: Gary R. Harmeyer LCDR NC USN  
 • Date: 8 December 1985  
 • Screen Generated By: The Software Bottling Company  
 Of New York, c1985  
 • Purpose: Determine monitoring orders of the  
 patient.  
 • Input Files Used: Monitor.Scr and Procfile.Prg  
 • Output Files Used: Orders.Dbf  
 • Calling Routine: Doc\_Menu.Prg  
 • Routine Called: Time.Prg  
 • Modification Date: 4 February 1986

• -- Screen Input Program For Monitor --

Do Setup  
 Public Xmonopt

Do While .I.

• -- Screen Display A:Monitor.Scr --

Set Color To W+/B,W+/B  
 Clear  
 ?? Flash+"S.A:Monitor.Scr/"  
 Set Color To W+/B,W+/B  
 Xmonopt = 19  
 Do Headings  
 Do Startup  
 @ 22,66 Get Xmonopt Pict "99" Range 0,20  
 Read

• -- Evaluate action based on the option selected --

Do Case

Case Xmonopt = 0  
 • -- Sign-Off  
 Close Databases  
 Close Procedure  
 Release All  
 Return To Master

Case Xmonopt = 1  
 Morder = "Apnea Monitor"  
 Passdata = "Q83 1"  
 Manpoint = 6  
 Do Replaord  
 Loop

```

Case Xmonopt = 2
  Morder = "A-line Set-up"
  Passdata = "Q16 1"
  Ptpoint = 4
  Todayonly = "I"
  Do Replaord
  Loop

Case Xmonopt = 3
  Morder = "A-line Readings"
  Do B:Time

  Do Case
    Case (Timeopt < 36 .Or. Timeopt = 41)
      * -- Less than Q2h or x 12
      Passdata = "Q19 1"
      Ptpoint = 0
    Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- Q2h or x 12
      Passdata = "Q19 2"
      Ptpoint = 2
    Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- Q1h or x 24
      Passdata = "Q19 3"
      Ptpoint = 4
  Endcase

  Do Replaord
  Loop

Case Xmonopt = 4
  Morder = "Cardiac Monitor"
  Passdata = "Q82 1"
  Monpoint = 6
  Do Replaord
  Loop

Case Xmonopt = 5
  Morder = "Cardiac Output"
  Do B:Time

  Do Case
    Case (Timeopt < 25 .Or. Timeopt = 41)
      * -- Less than IID or x 3
      Passdata = "Q22 1"
      Ptpoint = 0
    Case (Timeopt > 24 .And. Timeopt < 34)
      * -- IID (x 3) and less than Q4h (x 6)
      Passdata = "Q22 2"

```

```

        Ptpoint = 2
        Case [Timeopt = 34 .Or. Timeopt = 35]
            * -- Q4h or x 6
            Passdata = "Q22 3"
            Ptpoint = 4
        Case [Timeopt = 36 .Or. Timeopt = 37]
            * -- Q2h or x 12
            Passdata = "Q22 4"
            Ptpoint = 8
        Case [Timeopt = 38 .Or. Timeopt = 39]
            * -- Q1h or x 24
            Passdata = "Q22 5"
            Ptpoint = 16
    Endcase

    Do Replaord
    Loop

Case Xmonopt = 6
    Morder = "Circulation Checks"
    Do B:Time

    Do Case
        Case [Timeopt < 36 .Or. Timeopt = 41]
            * -- Less than Q2h or x 12
            Passdata = "Q10 1"
            Ptpoint = 0
        Case [Timeopt = 36 .Or. Timeopt = 37]
            * -- Q2h or x 12
            Passdata = "Q10 2"
            Ptpoint = 2
        Case [Timeopt = 38 .Or. Timeopt = 39]
            * -- Q1h or x 24
            Passdata = "Q10 3"
            Ptpoint = 4
    Endcase

    Do Replaord
    Loop

Case Xmonopt = 7
    Morder = "CVP Readings (Manually)"
    Do B:Time

    Do Case
        Case [Timeopt < 36 .Or. Timeopt = 41]
            * -- Less than Q2h or x 12
            Passdata = "Q12 1"
            Ptpoint = 0
        Case [Timeopt = 36 .Or. Timeopt = 37]

```

```

      * -- Q2h or x 12
      Passdata = "Q12 2"
      Ptpoint = 2
      Case (Timeopt = 38 .Or. Timeopt = 39)
        * -- Q1h or x 24
        Passdata = "Q12 3"
        Ptpoint = 4
      Endcase

      Do Replaord
      Loop

Case Xmonopt = 8
  Morder = "Fundus Checks"
  Do B:Time

  Do Case
    Case (Timeopt < 36 .Or. Timeopt = 41)
      * -- Less than Q2h or x 12
      Passdata = "Q14 1"
      Ptpoint = 0
    Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- Q2h or x 12
      Passdata = "Q14 2"
      Ptpoint = 2
    Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- Q1h or x 24
      Passdata = "Q14 3"
      Ptpoint = 4
    Endcase

    Do Replaord
    Loop

Case Xmonopt = 9
  Morder = "Intake & Output"
  Do B:Time

  Do Case
    Case (Timeopt < 25 .Or. Timeopt = 41)
      * -- Less than Q8h or x 3
      Passdata = "Q9 1"
      Ptpoint = 0
    Case (Timeopt > 24 .And. Timeopt < 34)
      * -- Q8h (x 3) and less than Q4h (x 6)
      Passdata = "Q9 2"
      Ptpoint = 2
    Case (Timeopt = 34 .Or. Timeopt = 35)
      * -- Q4h or x 6
      Passdata = "Q9 3"

```

```

        Ptpoint = 4
        Case (Timeopt = 36 .Or. Timeopt = 37)
            * -- Q2h or x 12
            Passdata = "Q9 4"
            Ptpoint = 8
        Case (Timeopt = 38 .Or. Timeopt = 39)
            * -- Q1h or x 24
            Passdata = "Q9 5"
            Ptpoint = 16
        Endcase

    Do Replaord
    Loop

Case Xmonopt = 10
    Morder = "ICP (Monitor) Set-Up"
    Passdata = "Q2 9"
    Ptpoint = 4
    Todayonly = "I"
    Do Replaord
    Loop

Case Xmonopt = 11
    Morder = "Manual ICP Readings"
    Do B:Time

    Do Case
        Case (Timeopt < 36 .Or. Timeopt = 41)
            * -- Less than Q2h or x 12
            Passdata = "Q13 1"
            Ptpoint = 0
        Case (Timeopt = 36 .Or. Timeopt = 37)
            * -- Q2h or x 12
            Passdata = "Q13 2"
            Ptpoint = 2
        Case (Timeopt = 38 .Or. Timeopt = 39)
            * -- Q1h or x 24
            Passdata = "Q13 3"
            Ptpoint = 4
        Endcase

    Do Replaord
    Loop

Case Xmonopt = 12
    Morder = "Monitor ICP Readings"
    Do B:Time

    Do Case
        Case (Timeopt < 36 .Or. Timeopt = 41)

```

```

      * -- Less than Q2h or x 12
      Passdata = "Q20 1"
      Ptpoint = 0
      Case [Timeopt = 36 .Or. Timeopt = 37]
      * -- Q2h or x 12
      Passdata = "Q20 2"
      Ptpoint = 2
      Case [Timeopt = 38 .Or. Timeopt = 39]
      * -- Q1h or x 24
      Passdata = "Q20 3"
      Ptpoint = 4
    Endcase

    Do Replaord
    Loop

Case Xmonopt = 13
  Morder = "Neuro Checks"
  Do B:Time

  Do Case
    Case [Timeopt < 34 .Or. Timeopt = 41]
      * -- Less than Q4h or x 6
      Passdata = "Q11 1"
      Ptpoint = 0
    Case [Timeopt = 34 .Or. Timeopt = 35]
      * -- Q4h or x 6
      Passdata = "Q11 2"
      Ptpoint = 3
    Case [Timeopt = 36 .Or. Timeopt = 37]
      * -- Q2h or x 12
      Passdata = "Q11 3"
      Ptpoint = 6
    Case [Timeopt = 38 .Or. Timeopt = 39]
      * -- Q1h or x 24
      Passdata = "Q11 4"
      Ptpoint = 12
    Endcase

  Do Replaord
  Loop

Case Xmonopt = 14
  Morder = "Pressure Monitor"
  Passdata = "Q85 1"
  Monpoint = 6
  Do Replaord
  Loop

```



```

Case Xmonopt = 15
Morder = "PAP/PA Wedge [Readings]"
Do B:Time

Do Case
  Case (Timeopt < 34 .Or. Timeopt = 41)
    * -- Less than Q4h or x 6
    Passdata = "Q21 1"
    Ptpoint = 0
  Case (Timeopt = 34 .Or. Timeopt = 35)
    * -- Q4h or x 6
    Passdata = "Q21 2"
    Ptpoint = 2
  Case (Timeopt = 36 .Or. Timeopt = 37)
    * -- Q2h or x 12
    Passdata = "Q21 3"
    Ptpoint = 4
  Case (Timeopt = 38 .Or. Timeopt = 39)
    * -- Q1h or x 24
    Passdata = "Q21 4"
    Ptpoint = 8
Endcase

```

```

Do Replaord
Loop

```

```

Case Xmonopt = 16
Morder = "Swan-Ganz Set-up"
Passdata = "Q18 1"
Ptpoint = 4
Todayonly = "T"
Do Replaord
Loop

```

```

Case Xmonopt = 17
Morder = "Temperature Monitor"
Passdata = "Q84 1"
Monpoint = 6
Do Replaord
Loop

```

```

Case Xmonopt = 18
Morder = "Transcutaneous Monitor"
Passdata = "Q15 1"
Ptpoint = 6
Do Replaord
Loop

```

```

Case Xmonopt = 19
* -- Doctor's Order Screen

```

Dmenu = '1'  
Return

Case Xmonopt = 20  
\* -- Master Screen  
Dmenu = ''  
Return

Endcase  
Release Xmonopt

Enddo

```

**** PHAM1.PRG ****
* Author: Gary R. Karmeyer LCDR NC USN
* Date: 29 November 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: One of two program modules used to
* determine phamacy orders of the
* patient.
* Input Files Used: Monitor.Scr and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Doc_Menu.Prg
* Routine Called: Time, Pham2 and Phamhelp.Prg
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Pham1 --
*
Do Setup
Public Xphamlopt

Do While .T.

    * -- Screen Display A:Pham1.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Pham1.Scr/"
    Set Color To W+/B,W+/B
    Xphamlopt = 26
    Do Headings
    Do Startup
    @ 22,66 Get Xphamlopt Pict "99" Range 1,27
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xphamlopt = 1
            Morder = "Benadryl 25mg [0]"
            Do B:Time
            Do Regmeds
            Do Replaord
            Loop

        Case Xphamlopt = 2
            Morder = "Benadryl 50mg [1M]"
            Do B:Time
            Do Regmeds

```

Do Replaord  
Loop

Case Xphamlopt = 3  
Morder = "Benadryl 50mg [IV]"  
Do B:Time  
Do IUmeds  
Do Replaord  
Loop

Case Xphamlopt = 4  
Morder = "Dimetapp 4mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 5  
Morder = "Dimetapp Elix 5mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 6  
Morder = "Phenergan 25mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 7  
Morder = "Phenergan 25mg [IM]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 8  
Morder = "Phenergan 25mg [SP]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 9  
Morder = "Ampicillin 250mg [O]"  
Do B:Time  
Do Regmeds

Do Replaord  
Loop

Case Xphamlopt = 10  
Morder = "Ampicillin 500mg [IM]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 11  
Morder = "Ampicillin 500mg [IV]"  
Do B:Time  
Do IUmEds  
Do Replaord  
Loop

Case Xphamlopt = 12  
Morder = "Ancef .5Gm [IM]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 13  
Morder = "Ancef .5Gm [IV]"  
Do B:Time  
Do IUmEds  
Do Replaord  
Loop

Case Xphamlopt = 14  
Morder = "Cefadyl 500mg [IM]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 15  
Morder = "Cefadyl 1.0Gm [IM]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 16  
Morder = "Cefadyl 1.0Gm [IV]"  
Do B:Time  
Do IUmEds

Do Replaord  
Loop

Case Xphamlopt = 17  
Morder = "Erythromycin 250mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 18  
Morder = "Erythromycin Susp 200mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 19  
Morder = "Keflex 250mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 20  
Morder = "Keflex Susp 125mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 21  
Morder = "Sulfacetamine 10% Salt [Op]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 22  
Morder = "Tetracycline 250mg [O]"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xphamlopt = 23  
Morder = "Tetracycline 500mg [IV]"  
Do B:Time  
Do IVmeds

```

Do Replaord
Loop

Case Xphamlopt = 24
* -- Help
Do B:Phamhelp
Loop

Case Xphamlopt = 25
* -- Next Screen (More Meds)
Do B:Pham2
Loop

Case Xphamlopt = 26
* -- Dr's Order Screen
Dmenu = '1'
Return

Case Xphamlopt = 27
* -- Master Screen
Dmenu = ' '
Return

Endcase
Release Xphamlopt

Enddo

```

```

**** PHAM2.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 29 Nov 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: One of two program modules to
* determine pharmacy orders of the
* patient.
* Input Files Used: Pham2.Scr and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Pham1.Prg
* Routine Called: Time.Prg
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Pham2 --
*
Do Setup
Public Xpham2opt

Do While .T.

    * -- Screen Display A:Pham2.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Pham2.Scr/"
    Set Color To W+/B,W+/B
    Xpham2opt = 24
    Do Headings
    Do Startup
    @ 22,66 Get Xpham2opt Pict "99" Range 1,24
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xpham2opt = 1
            Morder = "Baric Acid 5% Solt (I)"
            Do B:Time

            Do Case
                * -- Expert system data
                Case (Timeopt < 6 .Or. Timeopt = 41)
                    Passdata = "Q48 5"
                    Ptpoint = 0
                Case (Timeopt > 5 .And. Timeopt < 34)
                    Passdata = "Q48 1"
                    Ptpoint = 2

```



```
Case [Timeopt = 34 .Or. Timeopt = 35]
  Passdata = "Q48 2"
  Ptpoint = 3
Case [Timeopt = 36 .Or. Timeopt = 37]
  Passdata = "Q48 3"
  Ptpoint = 6
Case [Timeopt = 38 .Or. Timeopt = 39]
  Passdata = "Q48 4"
  Ptpoint = 12
Endcase
```

```
Do Replaord
Loop
```

```
Case Xpham2opt = 2
  Morder = "Atropine 0.4mg [O]"
  Do B:Time
  Do Regmeds
  Do Replaord
  Loop
```

```
Case Xpham2opt = 3
  Morder = "Atropine 0.4mg [IM]"
  Do B:Time
  Do Regmeds
  Do Replaord
  Loop
```

```
Case Xpham2opt = 4
  Morder = "Valium 5mg [O]"
  Do B:Time
  Do Regmeds
  Do Replaord
  Loop
```

```
Case Xpham2opt = 5
  Morder = "Valium 5mg [IM]"
  Do B:Time
  Do Regmeds
  Do Replaord
  Loop
```

```
Case Xpham2opt = 6
  Morder = "Valium 5mg [IV]"
  Do B:Time
  Do IUmEds
  Do Replaord
  Loop
```

Case Xpham2opt = 7  
Morder = "Digoxin .125mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 8  
Morder = "Digoxin .250mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 9  
Morder = "Inderal 10mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 10  
Morder = "Inderal 40mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 11  
Morder = "Inderal 1mg (IV)"  
Do B:Time  
Do IVmeds  
Do Replaord  
Loop

Case Xpham2opt = 12  
Morder = "Minipres 1mg (O)"  
Do D:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 13  
Morder = "Minipres 2mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 14  
Morder = "Minipres 5mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 15  
Morder = "Dilantin 100mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 16  
Morder = "Dilantin Supp 125mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 17  
Morder = "Elavil 10mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 18  
Morder = "Elavil 25mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 19  
Morder = "Elavil 50mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 20  
Morder = "Phenobarbital 15mg (0)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 21  
Morder = "Phenobarbital 30mg (O)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 22  
Morder = "Phenobarbital 60mg (IM)"  
Do B:Time  
Do Regmeds  
Do Replaord  
Loop

Case Xpham2opt = 23  
\* -- Help  
Do B:Phamhelp  
Loop

Case Xpham2opt = 24  
\* -- Previous Screen  
Return

Endcase  
Release Xpham2opt

Enddo

```

**** PHAMHELP.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 29 November 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Brief on-line help facility for the
* Pham1 and Pham2.Prg.
* Input Files Used: Phamhelp.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Pham1 or Pham2.Prg
* Routine Called: None
* Modification Date: 26 January 1986
*
* -- Screen Input Program For Phamhelp --
*
Do Setup

Do While .T.

    * -- Screen Display A:Phamhelp.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Phamhelp.Scr/"
    @ 24,0
    @ 24,37 Say "Press Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Return

Enddo

```

\*\*\*\* ROUTINE.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 29 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Determine the ward routine orders  
\* of the patient.  
\* Input Files Used: Routine.Scr and Procfile.Prg  
\* Output Files Used: Orders.Dbf  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: Time.Prg  
\* Modification Date: 19 February 1986  
\*

\* -- Screen Input Program For Routine --  
\*

Do Setup  
Public Xrouopt

Do While .T.

\* -- Screen Display A:Routine.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Routine.Scr/"  
Set Color To W+/B,W+/B  
Xrouopt = 30  
Do Headings  
Do Startup  
@ 22,66 Get Xrouopt Pict "99" Range 0,31  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xrouopt = 0  
\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xrouopt = 1  
Morder = "Ace Wrap Lower Ext"  
Passdata = "Q36 1"  
Ptpoint = 2  
Do Replaord  
Loop

```

Case Xrouopt = 2
  Morder = "Chest Tube Insertion"
  Passdata = "Q57 1"
  Ptpoint = 4
  Todayonly = "I"
  Do Replaord
  Loop

Case Xrouopt = 3
  Morder = "Circumcision Care"
  Do B:Time
  Passdata = "Q52 1"
  Ptpoint = 2
  Do Replaord
  Loop

Case Xrouopt = 4
  Morder = "Complex Dressing Change"
  Do B:Time

  Do Case
    Case [Timeopt < 6 .Or. Timeopt = 41]
      * -- Less than one dressing
      Passdata = "Q37 1"
      Ptpoint = 0
    Case [Timeopt > 5 .And. Timeopt < 22]
      * -- One dressing change
      Passdata = "Q37 8"
      Ptpoint = 4
    Case [Timeopt > 21 .And. Timeopt < 25]
      * -- Two dressing changes
      Passdata = "Q37 9"
      Ptpoint = 8
    Case [Timeopt > 24 .And. Timeopt < 31]
      * -- Three dressing changes
      Passdata = "Q37 10"
      Ptpoint = 12
    Case [Timeopt > 30 .And. Timeopt < 34]
      * -- Four dressing changes
      Passdata = "Q37 11"
      Ptpoint = 16
    Case [Timeopt = 34 .Or. Timeopt = 35]
      * -- Six dressing changes
      Passdata = "Q37 12"
      Ptpoint = 24
    Case [Timeopt = 36 .Or. Timeopt = 37]
      * -- Twelve dressing changes
      Passdata = "Q37 13"
      Ptpoint = 48
  
```

```
Case [Timeopt = 38 .Or. Timeopt = 39]
  * -- Twenty-four dressing changes
  Passdata = "Q37 14"
  Ptpoint = 96
Endcase
```

```
Do Replaord
Loop
```

```
Case Xrouopt = 5
  Morder = "EKG Rhythm Strip"
  Passdata = "Q33 1"
  Ptpoint = 2
  Todayonly = "I"
  Do Replaord
  Loop
```

```
Case Xrouopt = 6
  Morder = "Foley Cath Care"
  Do B:Time
```

```
Do Case
  Case [Timeopt < 22 .Or. Timeopt = 41]
    * -- Tube care less than x 2
    Passdata = "Q39 1"
    Ptpoint = 0
  Case [Timeopt > 21 .And. Timeopt < 25]
    * -- Tube care x 2
    Passdata = "Q39 2"
    Ptpoint = 2
  Case [Timeopt > 24 .And. Timeopt < 31]
    * -- Tube care x 3
    Passdata = "Q39 3"
    Ptpoint = 3
  Case [Timeopt > 30 .And. Timeopt < 34]
    * -- Tube care x 4
    Passdata = "Q39 4"
    Ptpoint = 4
  Case [Timeopt = 34 .Or. Timeopt = 35]
    * -- Tube care x 6
    Passdata = "Q39 5"
    Ptpoint = 6
  Case [Timeopt = 36 .Or. Timeopt = 37]
    * -- Tube care x 12
    Passdata = "Q39 6"
    Ptpoint = 12
  Case [Timeopt = 38 .Or. Timeopt = 39]
    * -- Tube care x 24
    Passdata = "Q39 7"
```



```

        Ptpoint = 24
    Endcase

    Do Replaord
    Loop

    Case Xrouopt = 7
        Morder = "Foley Cath Insertion"
        Passdata = "Q32 1"
        Ptpoint = 2
        Todayonly = "I"
        Do Replaord
        Loop

    Case Xrouopt = 8
        Morder = "Guiac Stools"
        Do B:Time
        Do Routine
        Do Replaord
        Loop

    Case Xrouopt = 9
        Morder = "Respiratory Isolation"
        Passdata = "Q54 2"
        Ptpoint = 2
        Do Replaord
        Loop

    Case Xrouopt = 10
        Morder = "Reverse Isolation"
        Passdata = "Q54 2"
        Ptpoint = 2
        Do Replaord
        Loop

    Case Xrouopt = 11
        Morder = "Strict Isolation"
        Passdata = "Q54 2"
        Ptpoint = 2
        Do Replaord
        Loop

    Case Xrouopt = 12
        Morder = "Lumbar Puncture"
        Passdata = "Q58 1"
        Ptpoint = 4
        Todayonly = "I"
        Do Replaord
        Loop

```

Case Xrouopt = 13  
Morder = "N-G Insertion"  
Passdata = "Q31 1"  
Ptpoint = 2  
Todayonly = "I"  
Do Replaord  
Loop

Case Xrouopt = 14  
Morder = "Paracentesis"  
Passdata = "Q60 1"  
Ptpoint = 4  
Todayonly = "I"  
Do Replaord  
Loop

Case Xrouopt = 15  
Morder = "Phototherapy"  
Passdata = "Q53 1"  
Ptpoint = 2  
Do Replaord  
Loop

Case Xrouopt = 16  
Morder = "ROM Exercises (Passive)"  
Do B:Time  
Do Range  
Do Replaord  
Loop

Case Xrouopt = 17  
Morder = "2-Point Restraints"  
Passdata = "Q50 1"  
Ptpoint = 2  
Do Replaord  
Loop

Case Xrouopt = 18  
Morder = "4-Point Restraints"  
Passdata = "Q50 2"  
Ptpoint = 2  
Do Replaord  
Loop

Case Xrouopt = 19  
Morder = "Posey Restraint"  
Passdata = "Q50 3"  
Ptpoint = 2  
Do Replaord  
Loop

```

Case Xrouopt = 20
  Morder = "Simple Dressing Change"
  Do B:Time

  Do Case
    Case (Timeopt < 22 .Or. Timeopt = 41)
      * -- Less than x 2
      Passdata = "Q37 1"
      Ptpoint = 0
    Case (Timeopt > 21 .And. Timeopt < 25)
      * -- X 2 or BID
      Passdata = "Q37 2"
      Ptpoint = 2
    Case (Timeopt > 24 .And. Timeopt < 31)
      * -- X 3 or TID
      Passdata = "Q37 3"
      Ptpoint = 3
    Case (Timeopt > 30 .And. Timeopt < 34)
      * -- X 4 or QID
      Passdata = "Q37 4"
      Ptpoint = 4
    Case (Timeopt = 34 .Or. Timeopt = 35)
      * -- X 6 or Q6h
      Passdata = "Q37 5"
      Ptpoint = 6
    Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- X 12 or Q2h
      Passdata = "Q37 6"
      Ptpoint = 12
    Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- X 24 or Q1h
      Passdata = "Q37 7"
      Ptpoint = 24
  Endcase

  Do Replaord
  Loop

```

```

Case Xrouopt = 21
  Morder = "Spec Gravity"
  Do B:Time
  Do Routine
  Do Replaord
  Loop

```

```

Case Xrouopt = 22
  Morder = "Spin HCT"
  Do B:Time
  Do Routine

```

```

Do Replaord
Loop

Case Xrouopt = 23
Morder = "Straight Cath"
Do B:Time

Do Case
  Case (Timeopt < 31 .Or. Timeopt = 41)
    * -- Less than x 4
    Passdata = "Q32 2"
    Ptpoint = 0
  Case (Timeopt > 30 .And. Timeopt < 41)
    * -- X 4 or more
    Passdata = "Q32 3"
    Ptpoint = 4
Endcase

Do Replaord
Loop

Case Xrouopt = 24
Morder = "Surgical Shave Prep"
Passdata = "Q34 1"
Ptpoint = 2
Todayonly = "I"
Do Replaord
Loop

Case Xrouopt = 25
Morder = "SS Enema"
Passdata = "Q35 1"
Ptpoint = 2
Todayonly = "I"
Do Replaord
Loop

Case Xrouopt = 26
Morder = "Tap Water Enema"
Passdata = "Q35 1"
Ptpoint = 2
Todayonly = "I"
Do Replaord
Loop

Case Xrouopt = 27
Morder = "Thoracentesis"
Passdata = "Q59 1"
Ptpoint = 4

```

Todayonly = "I"  
Do Replaord  
Loop

Case Xrouopt = 28  
Morder = "Tube Care (not trach)"  
Do B:Time  
Do Case  
Case (Timeopt < 22 .Or. Timeopt = 41)  
\* -- Tube care less than x 2  
Passdata = "Q38 1"  
Ptpoint = 0  
Case (Timeopt > 21 .And. Timeopt < 25)  
\* -- Tube care x 2  
Passdata = "Q38 2"  
Ptpoint = 2  
Case (Timeopt > 24 .And. Timeopt < 31)  
\* -- Tube care x 3  
Passdata = "Q38 3"  
Ptpoint = 3  
Case (Timeopt > 30 .And. Timeopt < 34)  
\* -- Tube care x 4  
Passdata = "Q38 4"  
Ptpoint = 4  
Case (Timeopt = 34 .Or. Timeopt = 35)  
\* -- Tube care x 6  
Passdata = "Q38 5"  
Ptpoint = 6  
Case (Timeopt = 36 .Or. Timeopt = 37)  
\* -- Tube care x 12  
Passdata = "Q38 6"  
Ptpoint = 12  
Case (Timeopt = 38 .Or. Timeopt = 39)  
\* -- Tube care x 24  
Passdata = "Q38 7"  
Ptpoint = 24  
Endcase

Do Replaord  
Loop

Case Xrouopt = 29  
Morder = "S & A of Urine"  
Do B:Time  
Do Routine  
Do Replaord  
Loop

```
Case Xrouopt = 30
* -- Doctor's Order Screen
Dmenu = '1'
Return
```

```
Case Xrouopt = 31
* -- Master Screen
Dmenu = ' '
Return
```

```
Endcase
Release Xrouopt
```

```
Enddo
```

\*\*\*\* US.PRg \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 29 November 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Determine the vital sign orders of  
\* the patient.  
\* Input Files Used: US.Scr and Procfile.Prg  
\* Output Files Used: Orders.Dbf  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: Time.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For US --

Do Setup  
Public Xvsopt

Do While .I.

\* -- Screen Display A:US.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:US.Scr/"  
Set Color To W+/B,W+/B  
Xvsopt = 12  
Do Headings  
Do Startup  
@ 22,66 Get Xvsopt Pict "99" Range 0,13  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xvsopt = 0  
\* -- Sign-Off  
Close Database  
Close Procedure  
Release All  
Return To Master

Case Xvsopt = 1  
Morder = "T-P-R, B/P"  
Do B:Time

Do Case  
Case Timeopt < 34

```

      * -- QID or less
      Passdata = "Q1 1"
      Ptpoint = 1
      Case (Timeopt = 34 .Or. Timeopt = 35)
      * -- Q4h or x 6
      Passdata = "Q1 2"
      Ptpoint = 2
      Case (Timeopt = 36 .Or. Timeopt = 37)
      * -- Q2h or x 12
      Passdata = "Q1 3"
      Ptpoint = 4
      Case (Timeopt = 38 .Or. Timeopt = 39)
      * -- Q1h or x 24
      Passdata = "Q1 4"
      Ptpoint = 8
      Case Timeopt = 41
      * -- No frequency indicated
      Passdata = "Q1 5"
      Ptpoint = 0
      Endcase

```

```

Do Replaord
Loop

```

```

Case Xvsopt = 2
Morder = "Post-op"
Passdata = "Q8 1"
Ptpoint = 6
Todayonly = "I"
Do Replaord
Loop

```

```

Case Xvsopt = 3
Morder = "Post Partum"
Passdata = "Q8 2"
Ptpoint = 6
Todayonly = "I"
Do Replaord
Loop

```

```

Case Xvsopt = 4
Morder = "Post Newborn"
Passdata = "Q8 3"
Ptpoint = 6
Todayonly = "I"
Do Replaord
Loop

```



```

Case Xvsopt = 5
Morder = "FHT"
Do B:Time

If (Timeopt < 34 .Or. Timeopt = 41)
* -- Less than Q4h
Passdata = "Q6 1"
Ptpoint = 0
Else
* -- Q4h or more
Passdata = "Q6 2"
Ptpoint = 2
Endif

Do Replaord
Loop

Case Xvsopt = 6
Morder = "Apical Pulse"
Do B:Time

If (Timeopt < 31 .Or. Timeopt = 41)
* -- Less than QID
Passdata = "Q3 1"
Ptpoint = 0
Else
* -- QID or more
Passdata = "Q3 2"
Ptpoint = 2
Endif

Do Replaord
Loop

Case Xvsopt = 7
Morder = "Femoral Pulse"
Do B:Time

If (Timeopt < 34 .Or. Timeopt = 41)
* -- Less than Q4h
Passdata = "Q4 1"
Ptpoint = 0
Else
* -- Q4h or more
Passdata = "Q4 2"
Ptpoint = 2
Endif

Do Replaord
Loop

```

```

Case Xvsopt = 8
Morder = "Pedal Pulse"
Do B:Time

If (Timeopt < 34 .Or. Timeopt = 41)
* -- Less than Q4h
Passdata = "Q5 1"
Ptpoint = 0
Else
* -- Q4h or more
Passdata = "Q5 2"
Ptpoint = 2
Endif

Do Replaord
Loop

```

```

Case Xvsopt = 9
Morder = "Axillary Temps"
Do B:Time

If (Timeopt < 31 .Or. Timeopt = 41)
* -- Less than QID
Passdata = "Q2 2"
Ptpoint = 0
Else
* -- QID or more
Passdata = "Q2 4"
Ptpoint = 2
Endif

Do Replaord
Loop

```

```

Case Xvsopt = 10
Morder = "Rectal Temps"
Do B:Time

If (Timeopt < 31 .Or. Timeopt = 41)
* -- Less than QID
Passdata = "Q2 1"
Ptpoint = 0
Else
* -- QID or more
Passdata = "Q2 3"
Ptpoint = 2
Endif

```

```

Do Replaord
Loop

Case Xvsopt = 11
Morder = "Tilt Test"
Do B:Time

If (Timeopt < 34 .Or. Timeopt = 41)
* -- Less than Q4h
Passdate = "Q7 1"
Ptpoint = 0
Else
* -- Q4h or more
Passdate = "Q7 2"
Ptpoint = 2
Endif

Do Replaord
Loop

Case Xvsopt = 12
* -- Doctor's Order Screen
Dmenu = '1'
Return

Case Xvsopt = 13
* -- Master Screen
Dmenu = ' '
Return

Endcase
Release Xvsopt

Enddo

```

\*\*\*\* XRAY.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 8 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Determine xray orders for the  
\* patient.  
\* Input Files Used: Xray.Scr and Procfile.Prg  
\* Output Files Used: Orders.Dbf  
\* Calling Routine: Doc\_Menu.Prg  
\* Routine Called: Time.Prg  
\* Modification Date: 4 February 1986  
\*

\* -- Screen Input Program For Xray --  
\*

Do Setup  
Public Xxrayopt

Do While .I.

\* -- Screen Display B:Xray.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.B:Xray.Scr/"  
Set Color To W+/B,W+/B  
Xxrayopt = 19  
Do Headings  
Do Startup  
@ 22,66 Get Xxrayopt Pict "99" Range 0,20  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xxrayopt = 0  
\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xxrayopt = 1  
Morder = "Abdomen Flat Plate Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 2  
Morder = "Abdomen AP Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 3  
Morder = "Abdomen 3-way Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 4  
Morder = "Angiography"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 5  
Morder = "Arteriography"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 6  
Morder = "Barium Enema"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 7  
Morder = "Brain Scan"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 8  
Morder = "Chest PA Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 9  
Morder = "Chest Lateral Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 10  
Morder = "CT Scan"

Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 11  
Morder = "Gallbladder Series"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 12  
Morder = "IUP"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 13  
Morder = "Sinus Series"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 14  
Morder = "Skull Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 15  
Morder = "Spine Xray"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 16  
Morder = "Tomography"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 17  
Morder = "Upper GI Series"  
Do B:Time  
Do Replaord  
Loop

Case Xxrayopt = 18  
Morder = "Ultrasound"  
Do B:Time

Do Replaord  
Loop

Case Xxrayopt = 19  
\* -- Doctor's Order Screen  
Dmenu = '1'  
Return

Case Xxrayopt = 20  
\* -- Master Screen  
Dmenu = ' '  
Return

Endcase  
Release Xxrayopt

Enddo

```

**** DISCONT.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 18 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Display patient orders to determine
* if any are to be discontinued.
* Input Files Used: Discont.Scr and Procfile.Prq
* Output Files Used: Orders.Dbf
* Calling Routine: Doctor.Prg
* Routine Calls: None
* Modification Date: 18 February 1986
*
* -- Screen Input Program For Discont --
*
Do Setup
Public Xdisopt,Xdcdate,Xdcorder,Xdcprac
Public Xdcfreq,Xmptfmpssn,Xordpack
Xordpack = .F.

* -- Identify correct patient to display orders --

Use B:Orders
Store "" + Ptfmpssn + "" To Xmptfmpssn
Locate For Fmpssn = &Xmptfmpssn .And. Module # 'N'

Do While .T.

* -- Store data from Dbf file into variable names --

Xdcdate = Odate
Xdctime = Otime
Xdcorder = Order
Xdcfreq = Freq
Xdcprac = Prac

* -- Screen Display A:Discont.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Discont.Scr/"
Set Color To W+/B,W+/B
Xdisopt = 1
Do Headings
@ 13,1 Say Xdcdate
@ 13,10 Say Xdctime
@ 13,19 Say Xdcorder
@ 13,47 Say Xdcfreq
@ 13,60 Say Xdcprac

```



@ 22,67 Get Xdisopt Pict "9" Range 0,4  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xdisopt = 0  
\* -- Sign-Off  
If Xordpack = .T.  
Pack  
Endif  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xdisopt = 1  
\* -- Next Order  
Skip  
Do While [(Fmpssn # &Xmptfmpssn).Or.(Module = "N")]  
IF EOF()  
@ 24,4 Say "No Additional Medical Orders On "  
@ 24,36 Say "This Patient -- Press Any Key To "  
@ 24,69 Say "Continue"  
Set Console Off  
Wait  
Set Console On  
If Xordpack = .T.  
Pack  
Endif  
Return  
Else  
Skip  
Endif  
Enddo  
IF EOF ()  
@ 24,4 Say "No Additional Medical Orders On "  
@ 24,36 Say "This Patient -- Press Any Key To "  
@ 24,69 Say "Continue"  
Set Console Off  
Wait  
Set Console On  
If Xordpack = .T.  
Pack  
Endif  
Return  
Else  
Loop  
Endif

```

Case Xdisopt = 2
* -- Discontinue The Order
Xordpack = .I.
Delete
Skip
Do While ((Fmpssn # &Xmptfmpssn).Or.(Module = "N"))
  IF EOF()
    @ 24,4 Say "No Additional Medical Orders On "
    @ 24,36 Say "This Patient -- Press Any Key To "
    @ 24,69 Say "Continue"
    Set Console Off
    Wait
    Set Console On
    Pack
    Return
  Else
    Skip
  Endif
Enddo
IF EOF ()
  @ 24,4 Say "No Additional Medical Orders On "
  @ 24,36 Say "This Patient -- Press Any Key To "
  @ 24,69 Say "Continue"
  Set Console Off
  Wait
  Set Console On
  Pack
  Return
Else
  Loop
Endif

Case Xdisopt = 3
* -- Dr's Master
If Xordpack = .I.
  Pack
Endif
Dmenu ="1"
Return

Case Xdisopt = 4
* -- Master
If Xordpack = .I.
  Pack
Endif
Dmenu =" "
Return

```

Endcase

Release Xdisopt, Xdcdate, Xdcorder, Xdcprac

Release Xdcfreq, Xmptfmpssn, Xordpack

Enddo

```

**** TRANSFER.PRg *****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 9 December 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Menu to determine if patient will
* be admitted, transferred or
* discharged.
* Input Files Used: Transfer.Scr and Procfile.Prg
* Output Files Used: Orders.Dbf
* Calling Routine: Doctor.Prg
* Routine Called: None
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Transfer --
*
Do Setup
Public Xtranopt

Do While .T.

    * -- Screen Display A:Transfer.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Transfer.Scr/"
    Set Color To W+/B,W+/B
    Xtranopt = 4
    Do Headings
    Do Startup
    @ 22,67 Get Xtranopt Pict "9" Range 0,5
    Read

    * -- Evaluate action based on the option selected --

    Do Case

        Case Xtranopt = 0
            * -- Sign-Off
            Close Databases
            Release All
            Close Procedure

        Case Xtranopt = 1
            Morder = "Admit"
            Passdata = "62 2"
            Ptpoint = 12
            Todayonly = "T"

```

```

    Do Replaord
    Loop

Case Xtranopt = 2
    Morder = "Transfer"
    Passdata = "62 1"
    Ptpoint = 4
    Todayonly = "I"
    Do Replaord
    Loop

Case Xtranopt = 3
    Morder = "Discharge"
    Do Replaord
    Loop

Case Xtranopt = 4
    * -- Doctor's Master Screen
    Dmenu = '1'
    Return

Case Xtranopt = 5
    * -- Master Screen
    Dmenu = ' '
    Return

Endcase
Release Xtranopt

Enddo

```

```

**** NURSE.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 20 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provide the nurse options of enter-
* ing or reviewing nursing care
* plans. The module allow the
* nurse to determine the patient
* classification level either in-
* ternally or externally.
* Input Files Used: Nurse.Scr and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Output File Created: Return.Txt
* Calling Routine: Ward2 or Ward3.Prg
* Routine Calls: Nurse1.Prg
* Modification Date: 3 March 1986
*
* -- Screen Input Program For Nurse --
*
Do Setup
Public Xnuropt,Nmenu,Xpoints,Xmonpt,Xemopt,Xroupt,Xlevel
Public Xnow,Xtoday
Nmenu = Space(1)
Xpoints = 0
Xmonpt = 0
Xemopt = 0
Xroupt = 0
Xlevel = Space(12)
Store DTOC(Date()) To Xnow
Store "" + Xnow + "" To Xtoday

Do While .T.

* -- Screen Display A:Nurse.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Nurse.Scr/"
Set Color To W+/B,W+/B
Xnuropt = 8
Do Headings
@ 22,67 Get Xnuropt Pict "9" Range 0,8
Read

* -- Evaluate action based on the option selected --

Do Case

```

```

Case Xnuropt = 0
* -- Sign-Off
Close Databases
Close Procedure
Release All
Return To Master

```

```

Case Xnuropt = 1
* -- Enter/Inactivate Nursing Care Plan
Do B:Nurse1
If Nmenu = "1"
    Loop
Else
    Return
Endif

```

```

Case Xnuropt = 2
* -- Review Nursing Care Plan
Clear
Set Color To W+/B,W+/B
@ 1,20 Say "Nursing Care Plan For:"
@ 1,43 Say Ourpt
@ 3,10 Say "Press -- Ctrl and S -- Keys "
@ 3,38 Say "to Pause The Scrolling If Necessary"
Use B:Ncaredb
Store "" + Ptfmpssn + "" To Mptfmpssn
Report Form B:NC For Nfmpssn = &mptfmpssn
Wait
Loop

```

```

Case Xnuropt = 3
* -- Print Nursing Care Plan
@ 24,0 Say "Turn On Your Printer, "
@ 24,22 Say "Then Hit Any Key To Print"
Set Console Off
Wait
Set Console On
Clear
@ 12,30 Say "Printing, Please Wait"
Set Console Off
Set Device To Print
@ 1,20 Say "Nursing Care Plan For:"
@ 1,43 Say Ourpt
Set Device To Screen
Use B:Ncaredb
Store "" + Ptfmpssn + "" To Mptfmpssn
Report Form B:NC Noject;
    To Print For Nfmpssn = &mptfmpssn
Set Console On
@ 24,0 Say "Finished Printing, Hit "

```

@ 24,22 Say "Any Key To Continue"  
Set Console Off  
Wait  
Set Console On  
Loop

Case Xnuropt = 4  
\* -- Determine Patient Classification Level  
Use B:Orders  
Store "" + Ptfmpssn + "" To Mptfmpssn  
Copy To B:Return Fields Expertsys Sdf;  
Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;  
[Onlytoday = "I" .And. Odate = &Xtoday]]  
Close Procedure  
Close Databases  
Release All  
\* -- Exit this portion of prototype software  
Quit

Case Xnuropt = 5  
\* -- Review Patient Care Requirements  
Clear  
Set Color To W+/B,W+/B  
@ 1,17 Say "Patient Care Requirements For:"  
@ 1,48 Say Ourpt  
@ 3,10 Say "Press -- Ctrl and S -- Keys To Pause "  
@ 3,47 Say "The Scrolling If Necessary"  
Use B:Orders  
Store "" + Ptfmpssn + "" To Mptfmpssn  
Report Form B:Ord For;  
Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;  
[Onlytoday = "I" .And. Odate = &Xtoday]]  
Wait  
Loop

Case Xnuropt = 6  
\* -- Print Patient Care Requirements  
@ 24,0 Say "Turn On Your Printer, "  
@ 24,23 Say "Then Hit Any Key To Print"  
Set Console Off  
Wait  
Set Console On  
Clear  
@ 12,30 Say "Printing, Please Wait"  
Set Console Off  
Set Device To Print  
@ 1,17 Say "Patient Care Requirements For:"  
@ 1,47 Say Ourpt  
Set Device To Screen  
Use B:Orders



```

Store "" + Ptfmpssn + "" To Mptfmpssn
Report Form B:Ord Noeject To Print For;
  Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;
    [Onlytoday = "I" .And. Odate = &Xtoday]]
Set Console On
@ 24,0 Say "Finished Printing, Hit "
@ 24,23 Say "Any Key To Continue"
Set Console Off
Wait
Set Console On
Loop

```

Case Xnuropt = 7

```

* -- Internal Patient Classification
Clear
Set Color To W+/B,W+/B
@ 7,25 Say "Please Wait While Calculating"
Use B:Orders
Store "" + Ptfmpssn + "" To Mptfmpssn
Sum Critical To Xpoints For;
  Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;
    [Onlytoday = "I" .And. Odate = &Xtoday]]
Sum Monpt To Xmonpt For;
  Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;
    [Onlytoday = "I" .And. Odate = &Xtoday]]
If Xmonpt > 0
  Xpoints = Xpoints + 6
Endif
Sum Emopt To Xemopt For;
  Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;
    [Onlytoday = "I" .And. Odate = &Xtoday]]
If Xemopt >= 10
  Xpoints = Xpoints + 10
Else
  Xpoints = Xpoints + Xemopt
Endif
Sum Roupt To Xroupt For;
  Fmpssn = &mptfmpssn .And. [Onlytoday = "F" .Or.;
    [Onlytoday = "I" .And. Odate = &Xtoday]]
Do Case
  Case Xroupt < 6
    Xpoints = Xpoints + 0
  Case [Xroupt > 5 .And. Xroupt < 12]
    Xpoints = Xpoints + 2
  Case [Xroupt > 11 .And. Xroupt < 18]
    Xpoints = Xpoints + 4
  Case [Xroupt > 17 .And. Xroupt < 24]
    Xpoints = Xpoints + 6

```

```

        Case Xroupt > 23
            Xpoints = Xpoints + 8
        Endcase

* -- Determine patient classification level based on
* -- patient care points --
Do Case
    Case Xpoints < 13
        Xlevel = "Category I"
    Case [Xpoints > 12 .And. Xpoints < 32]
        Xlevel = "Category II"
    Case [Xpoints > 31 .And. Xpoints < 64]
        Xlevel = "Category III"
    Case [Xpoints > 63 .And. Xpoints < 96]
        Xlevel = "Category IV"
    Case [Xpoints > 95 .And. Xpoints < 146]
        Xlevel = "Category U"
    Case Xpoints > 146
        Xlevel = "Category IV"
Endcase

Clear
Set Color To W+/B,W+/B
@ 7,30 Say "Patient: "
@ 7,39 Say Ourpt
@ 8,30 Say "Is In: "
@ 8,37 Say Xlevel
@ 10,30 Say "Point Value Is:"
@ 10,46 Say Xpoints
@ 24,0 Say "Calculation Complete -- "
@ 24,24 Say "Press Any Key To Continue"
Set Console Off
Wait
Set Console On
Loop

Case Xnuropt = 8
    * -- Master Screen
    Return

Endcase
Release Xnuropt,Xpoints,Xmonpt,Xemopt,Xroupt,Xlevel
Release Xnow,Xtoday

Enddo

```

\*\*\*\* NURSE1.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 20 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Enables the nurse to enter or  
\* modify a nursing care plan.  
\* Input Files Used: Nurse1.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Nurse.Prg  
\* Routine Calls: N\_Diag or Inact.Prg  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Nurse1 --

Do Setup  
Public Xnurslopt

Do While .T.

\* -- Screen Display A:Nurse1.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Nurse1.Scr/"  
Set Color To W+/B,W+/B  
Xnurslopt = 4  
Do Headings  
@ 22,67 Get Xnurslopt Pict "9" Range 0,4  
Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xnurslopt = 0

\* -- Sign-Off  
Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xnurslopt = 1

\* -- Enter A New Care Plan  
Do B:N\_Diag  
Return

Case Xnurslopt = 2

\* -- Inactivate A Nursing Care Plan

Do B:Inactive  
Return

Case Xnurslopt = 3  
\* -- Nurse's Master Screen  
Nmenu = "1"  
Return

Case Xnurslopt = 4  
\* -- Master Screen  
Store ' ' To Nmenu  
Return

Endcase  
Release Xnurslopt

Enddo

\*\*\*\* N\_DIAG.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
 \* Date: 20 December 1985  
 \* Screen Generated By: The Software Bottling Company  
 \* Of New York, c1985  
 \* Purpose: Allows the nurse to chose from a  
 \* menu of four nursing diagnoses.  
 \* Input Files Used: N\_Diag.Scr and Procfile.Prg  
 \* Output Files Used: None  
 \* Calling Routine: Nursel.Prg  
 \* Routine Called: Assess\_1, Assess\_2, Assess\_3, or  
 \* Assess\_4.Prg  
 \* Modification Date: 4 February 1986

\* -- Screen Input Program For N\_Diag --

Do Setup

Public Xndiagopt, Nursdiag, Emoteach, Nrelate, Ngoal, Nassess

Public Assoth, Reloth, Gooath, Ordoth

Nursdiag = Space(30)

Emoteach = Space(19)

Nrelate = Space(25)

Ngoal = Space(38)

Nassess = Space(27)

Assoth = Space(27)

Reloth = Space(25)

Gooath = Space(38)

Ordoth = Space(27)

Do While .T.

\* -- Screen Display A:N\_Diag.Scr --

Set Color To W+/B, W+/B

Clear

?? Flash+"S.A:N\_Diag.Scr/"

Set Color To W+/B, W+/B

Xndiagopt = 5

Do Headings

Do Startup

@ 22,67 Get Xndiagopt Pict "9" Range 0,6

Read

\* -- Evaluate action based on the option selected --

Do Case

Case Xndiagopt = 0

\* -- Sign-OFF

Close Databases  
Close Procedure  
Release All  
Return To Master

Case Xndiagopt = 1  
Nursdiag = "Comfort Alteration In: Pain"  
Do B:Assess\_1  
Loop

Case Xndiagopt = 2  
Nursdiag = "Communication Impaired: Verbal"  
Do B:Assess\_2  
Loop

Case Xndiagopt = 3  
Nursdiag = "Impaired Physical Mobility"  
Do B:Assess\_3  
Loop

Case Xndiagopt = 4  
Nursdiag = "Self-Care Deficit"  
Do B:Assess\_4  
Loop

Case Xndiagopt = 5  
\* -- Nurse's Master Screen  
Nmenu = "1"  
Return

Case Xndiagopt = 6  
\* -- Master Screen  
Nmenu = " "  
Return

Endcase  
Release Xndiagopt

Enddo

\*\*\*\* ASSESS\_1.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 20 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select nursing assessments for a  
\* patient with a nursing diagnosis  
\* of comfort alteration in: pain.  
\* Input Files Used: Assess\_1.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: N\_Diag.Prg  
\* Routine Called: Relate\_1.Prg  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Assess\_1 --

Do Setup  
Public Xasslopt

Do While .T.

\* -- Screen Display A:Assess\_1.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Assess\_1.Scr/"  
Set Color To W+/B,W+/B  
Xasslopt = 11  
Do Headings  
@ 22,66 Get Xasslopt Pict "99" Range 1,16  
Read

\* -- Allows the nurse to document assessment of the  
\* -- patient --

Do Case

Case Xasslopt = 1  
Nassess = "Altered Time Perception"  
Do B:Relate\_1  
Return

Case Xasslopt = 2  
Nassess = "Alteration In Muscle Tone"  
Do B:Relate\_1  
Return

```

Case Xasslopt = 3
  Nassest = "Autonomic Response"
  Do B:Relate_1
  Return

Case Xasslopt = 4
  Nassest = "Distraction Behavior"
  Do B:Relate_1
  Return

Case Xasslopt = 5
  Nassest = "Facial Mask"
  Do B:Relate_1
  Return

Case Xasslopt = 6
  @ 18,24 Get Assoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Nassest = Assoth
  Do B:Relate_1
  Return

Case Xasslopt = 7
  Nassest = "Guarding Behavior"
  Do B:Relate_1
  Return

Case Xasslopt = 8
  Nassest = "Impaired Thought Process"
  Do B:Relate_1
  Return

Case Xasslopt = 9
  Nassest = "Narrowing Focus"
  Do B:Relate_1
  Return

Case Xasslopt = 10
  Nassest = "Pacing"
  Do B:Relate_1
  Return

Case Xasslopt = 11
  Nassest = "Patient Report"
  Do B:Relate_1
  Return

Case Xasslopt = 12
  Nassest = "Self_Focusing"

```



Do B:Relate\_1  
Return

Case Xasslopt = 13  
Nassess = "Talkative"  
Do B:Relate\_1  
Return

Case Xasslopt = 14  
Nassess = "Verbal Complaint"  
Do B:Relate\_1  
Return

Case Xasslopt = 15  
Nassess = "Verbal Complaint"  
Do B:Relate\_1  
Return

Case Xasslopt = 16  
Nassess = "W/draw From Social Contact"  
Do B:Relate\_1  
Return

Endcase  
Release Xasslopt

Enddo

```

**** RELATE_1.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 20 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select related factors for a
* patient with a nursing diagnosis
* of comfort alteration in: pain.
* Input Files Used: Relate_1.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Assess_1.Prg
* Routine Called: Goal_1.Prg
* Modification Date: 1 February 1986
*
* -- Screen Input Program For Relate_1 --
*
Do Setup
Public Xrellopt

Do While .T.

    * -- Screen Display A:Relate_1.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Relate_1.Scr/"
    Set Color To W+/B,W+/B
    Xrellopt = 2
    Do Headings
    @ 22,67 Get Xrellopt Pict "9" Range 1,7
    Read

    * -- Previous assessment is related to some cause --

    Do Case

        Case Xrellopt = 1
            Nrelate = "Altered Sensation"
            Do B:Goal_1
            Return

        Case Xrellopt = 2
            Nrelate = "Disease / Condition"
            Do B:Goal_1
            Return

        Case Xrellopt = 3
            Nrelate = "Emotional State"

```

```

    Do B:Goal_1
    Return

Case Xrellopt = 4
    @ 17,14 Get Reloth;
    Pict "XXXXXXXXXXXXXXXXXXXXXXXXXX"
    Read
    Nrelate = Reloth
    Do B:Goal_1
    Return

Case Xrellopt = 5
    Nrelate = "Surgical Procedure"
    Do B:Goal_1
    Return

Case Xrellopt = 6
    Nrelate = "Trauma"
    Do B:Goal_1
    Return

Case Xrellopt = 7
    Nrelate = "Treatment Regime"
    Do B:Goal_1
    Return

Endcase
Release Xrellopt

Enddo

```

\*\*\*\* GOAL\_1.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 20 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a patient goal for a  
\* patient with a nursing diagnosis  
\* of comfort alteration in: pain.  
\* Input Files Used: Goal\_1.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Relate\_1.Prg  
\* Routine Called: Norder1A or Norder1B.Prg  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Goal\_1 --

Do Setup  
Public Xgoalopt

Do While .T.

\* -- Screen Display A:Goal\_1.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Goal\_1.Scr/"  
Set Color To W+/B,W+/B  
Xgoalopt = 2  
Do Headings  
@ 22,67 Get Xgoalopt Pict "9" Range 1,5  
Read

\* -- Allows nurse to select specific goal attainable  
\* -- by this patient --

Do Case

Case Xgoalopt = 1  
Ngoal = "Communicates Pain Free"  
Do B:Norder1A  
Return

Case Xgoalopt = 2  
Ngoal = "Communicates Experiences Less Pain"  
Do B:Norder1A  
Return

Case Xgoalopt = 3  
 Ngoal = "Communicates Experience Tolerable Pain"  
 Do B:Norder1A  
 Return

Case Xgoalopt = 4  
 Ngoal = "Demos Skills/Knowledge To Achieve Goal"  
 Do B:Norder1B  
 Return

Case Xgoalopt = 5  
 @ 17,34 Get Goooth;  
 Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
 Read  
 Ngoal = Goooth  
 Do B:Norder1A  
 Return

Endcase  
Release Xgoalopt

Enddo

\*\*\*\* NORDER1A.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 20 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a nursing order for a pa-  
\* tient whose goal is communicates  
\* experiences less/tolerable pain  
\* or is pain free.  
\* Input Files Used: Norder1A.Scr, Time, Emosup, Teach  
\* and Procfile.Prg  
\* Output Files Used: Orders.Dbf and Ncaredb.Dbf  
\* Calling Routine: Goal\_1.Prg  
\* Routine Called: None  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Norder1A --

Do Setup  
Public Xnord1aopt

Do While .T.

\* -- Screen Display A:Norder1A.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Norder1A.Scr/"  
Set Color To W+/B,W+/B  
Xnord1aopt = 10  
Do Headings  
@ 22,66 Get Xnord1aopt Pict "99" Range 1,10  
Read

\* -- Nursing orders are determined by evaluating the  
\* -- case statement, then place data into Ncaredb and  
\* -- Orders.Dbf files --

Do Case

Case Xnord1aopt = 1  
Morder = "Assess Pain Factors"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

```

Case Xnordlaopt = 2
  Morder = "Assess/Evaluate Pain"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 3
  Morder = "Encour To Use Coping Skills"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 4
  Morder = "Explain Proc & Tests"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 5
  @ 18,10 Get Ordoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 6
  Morder = "Offer PRN Medications"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 7
  Morder = "Provide Emotional Support"
  Do B:Emosup
  Do Replaord
  Do Repnrord
  Return

Case Xnordlaopt = 8
  Morder = "Schedule Quiet Times"
  Do B:Time
  Do Replaord

```

Do Repnrord  
Return

Case Xnordlaopt = 9  
Morder = "Teach Alt Coping Strategies"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnordlaopt = 10  
Morder = "Util Diversional Activities"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnordlaopt

Enddo



\*\*\*\* NORDER1B.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 20 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a nursing order for a pa-  
\* tient whose goal is demonstrates  
\* skills and knowledge to achieve  
\* goals.  
\* Input Files Used: Norder1B.Scr, Teach & Procfile.Prg  
\* Output Files Used: Orders.Dbf and Ncaredb.Dbf  
\* Calling Routine: Goal\_1.Prg  
\* Routine Called: None  
\* Modification Date: 1 February 1986

\* -- Screen Input Program For Norder1B --

Do Setup  
Public Xnord1bopt

Do While .T.

\* -- Screen Display A:Norder1B.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Norder1B.Scr/"  
Set Color To W+/B,W+/B  
Xnord1bopt = 1  
Do Headings  
@ 22,67 Get Xnord1bopt Pict "9" Range 1,5  
Read

\* -- Nursing orders are determined by evaluating the  
\* -- case statement, then place data into Ncaredb and  
\* -- Orders.Dbf files --

Do Case

Case Xnord1bopt = 1  
Morder = "Teach: Deep Breathing Exer"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord1bopt = 2  
Morder = "Teach: Prog/sive Relax Exer"

```
Morder = "Teach: Deep Breathing Exer"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return
```

```
Case Xnordlbopt = 2  
Morder = "Teach: Prog/sive Relax Exer"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return
```

```
Case Xnordlbopt = 3  
Morder = "Teach: Relaxation Response"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return
```

```
Case Xnordlbopt = 4  
Morder = "Teach: Diversional Activity"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return
```

```
Case Xnordlbopt = 5  
@ 18,38 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return
```

```
Endcase  
Release Xnordlbopt
```

```
Enddo
```

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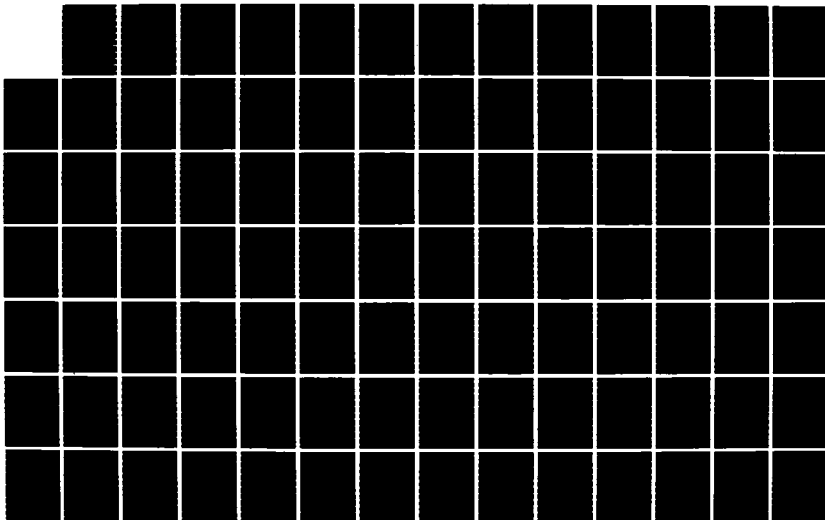
A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION(U) NAVAL  
POSTGRADUATE SCHOOL MONTEREY CA G R HARMEYER MAR 86

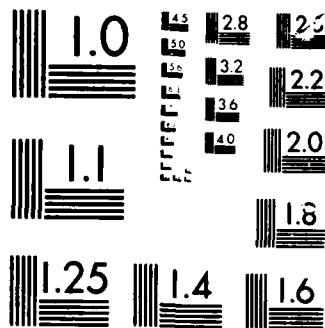
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NL





```

**** TEACH.PRGM *****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu to select teaching
* requirements of the patient.
* Input Files Used: Teach.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Norder1A, Norder1B, Norder2C, and
* order3E.Prg
* Routine Called: None
* Modification Date: 3 February 1986
*
* -- Screen Input Program For Teach --
*
Do Setup
Public Xteachopt
Xteachopt = Space(1)

Do While .T.

    * -- Screen Display A:Teach.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Teach.Scr/"
    Set Color To W+/B,W+/B
    @ 19,54 Get Xteachopt Pict "!"
    Read

    * -- Validate response --

    Do While .Not. (Xteachopt ="A" .Or. Xteachopt ="B" .Or.;
        Xteachopt = "C" .Or. Xteachopt="D")
        @ 19,53 Clear
        Store ' ' To Xteachopt
        @ 24,0 Say "Re-Enter Letter A, B, C, or D"
        @ 19,54 Get Xteachopt Pict "!"
        Read
    Enddo

    * -- Determine teaching requirements by evaluating
    * -- option selected --

    Do Case

        Case Xteachopt = "A"
            Emoteach = "Group Teaching"

```

Passdata = "Q76 1"  
Ptpoint = 2  
Return

Case Xteachopt = "B"  
Emoteach = "Pre-op Teaching"  
Passdata = "Q77 1"  
Ptpoint = 4  
Todayonly = "I"  
Return

Case Xteachopt = "C"  
\* -- Return to previous screen  
Return

Case Xteachopt = "D"  
Emoteach = "Structured Teaching"  
Passdata = "Q78 1"  
Ptpoint = 4  
Return

Endcase  
Release Xteachopt

Enddo

```

**** EMOSUP.PRG ****
* Author: Gary R.Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu to select emotional
* support requirements of the
* patient.
* Input Files Used: Emosup.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Norder1A, Norder4C, Norder4D,
* and Norder4E.Prg
* Routine Called: None
* Modification Date: 25 January 1986
*
* -- Screen Input Program For Emosup --
*
Do Setup
Public Xesupopt
Xesupopt = Space(1)

Do While .T.

    * -- Screen Display A:Emosup.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Emosup.Scr/"
    Set Color To W+/B,W+/B
    @ 21,54 Get Xesupopt Pict "!"
    Read

    * -- Validate response --

    Do While .Not. (Xesupopt ="A" .Or. Xesupopt ="B" .Or.;
        Xesupopt = "C" .Or. Xesupopt="D")
        @ 21,53 Clear
        Store ' ' To Xesupopt
        @ 24,0 Say "Re-Enter Letter A, B, C, or D"
        @ 21,54 Get Xesupopt Pict "!"
        Read
    Enddo

    * -- Determine emotional support requirements by eval-
    * uating the option selected --

    Do Case

```

Case Xesupopt = "A"  
Emoteach = "Pt/Family Support"  
Passdata = "Q79 1"  
Emopoint = 4  
Return

Case Xesupopt = "B"  
Emoteach = "Modify Lifestyle"  
Passdata = "Q80 1"  
Emopoint = 4  
Return

Case Xesupopt = "C"  
Emoteach = "Sensory Deprivation"  
Passdata = "Q81 1"  
Emopoint = 6  
Return

Case Xesupopt = "D"  
\* -- Return to previous screen  
Return

Endcase  
Release Xesupopt

Enddo



```

**** ASSESS_2.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select nursing assessment for a
* patient with a nursing diagnosis
* of communication impairment:
* verbal.
* Input Files Used: Assess_2.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: N_Diag.Prg
* Routine Called: Relate_2.Prg
* Modification Date: 3 February 1986
*
* -- Screen Input Program For Assess_2 --
*
Do Setup
Public Xass2opt

Do While .T.

    * -- Screen Display A:Assess_2.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Assess_2.Scr/"
    Set Color To W+/B,W+/B
    Xass2opt = 01
    Do Headings
    @ 22,67 Get Xass2opt Pict "99" Range 1,13
    Read

    * -- Allows nurse to document assessment of the
    * -- patient --

    Do Case

        Case Xass2opt = 1
            Nassess = "Anxiety"
            Do B:Relate_2
            Return

        Case Xass2opt = 2
            Nassess = "Disorientation"
            Do B:Relate_2
            Return

```

```

Case Xass2opt = 3
  Nassess = "Fear"
  Do B:Relate_2
  Return

Case Xass2opt = 4
  Nassess = "Frustration"
  Do B:Relate_2
  Return

Case Xass2opt = 5
  @ 17,24 Get Assoth;
  Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Nassess = Assoth
  Do B:Relate_2
  Return

Case Xass2opt = 6
  Nassess = "Inability to Hear"
  Do B:Relate_2
  Return

Case Xass2opt = 7
  Nassess = "Inability to Speak"
  Do B:Relate_2
  Return

Case Xass2opt = 8
  Nassess = "Incomprehensible Speech"
  Do B:Relate_2
  Return

Case Xass2opt = 9
  Nassess = "Refusal to Speak"
  Do B:Relate_2
  Return

Case Xass2opt = 10
  Nassess = "Slurring"
  Do B:Relate_2
  Return

Case Xass2opt = 11
  Nassess = "Stuttering"
  Do B:Relate_2
  Return

Case Xass2opt = 12
  Nassess = "Tearfulness"

```

Do B:Relate\_2  
Return

Case Xass2opt = 13  
Nassess = "Thought Disorder"  
Do B:Relate\_2  
Return

Endcase  
Release Xass2opt

Enddo

```

**** RELATE_2.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select related factors for a pa-
* tient with a nursing diagnosis of
* communication, impaired: verbal.
* Input Files Used: Relate_2.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Assess_2.Prg
* Routine Called: Goal_2.Prg
* Modification Date: 3 February 1986

```

```

* -- Screen Input Program For Relate_2 --

```

```

Do Setup
Public Xrel2opt

```

```

Do While .T.

```

```

* -- Screen Display A:Relate_2.Scr --

```

```

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Relate_2.Scr/"
Set Color To W+/B,W+/B
Xrel2opt = 01
Do Headings
@ 22,67 Get Xrel2opt Pict "99" Range 1,10
Read

```

```

* -- Previous assessment is related to some cause --

```

```

Do Case

```

```

Case Xrel2opt = 1
Nrelate = "Anatomical Impairment"
Do B:Goal_2
Return

```

```

Case Xrel2opt = 2
Nrelate = "Cultural Difference"
Do B:Goal_2
Return

```

```

Case Xrel2opt = 3
Nrelate = "Developmental Age"

```

```

    Do B:Goal_2
    Return

Case Xrel2opt = 4
    Nrelate = "Disease Process"
    Do B:Goal_2
    Return

Case Xrel2opt = 5
    @ 17,14 Get Reloth;
    Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
    Read
    Nrelate = Reloth
    Do B:Goal_2
    Return

Case Xrel2opt = 6
    Nrelate = "Foreign Language"
    Do B:Goal_2
    Return

Case Xrel2opt = 7
    Nrelate = "Mental Capacity"
    Do B:Goal_2
    Return

Case Xrel2opt = 8
    Nrelate = "Sedation"
    Do B:Goal_2
    Return

Case Xrel2opt = 9
    Nrelate = "Surgical Procedure"
    Do B:Goal_2
    Return

Case Xrel2opt = 10
    Nrelate = "Treatment Regime"
    Do B:Goal_2
    Return

Endcase
Release Xrel2opt

Enddo

```

```

**** GOAL_2.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Provides a menu for the nurse to
* select a patient goal for a pa-
* tient with a nursing diagnosis of
* communication, impaired: verbal.
* Input Files Used: Goal_2.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Relate_2.Prg
* Routine Called: Norder2A, Norder2B or Norder2C.Prg
* Modification Date: 3 February 1986

```

```

* -- Screen Input Program For Goal_2 --

```

```

Do Setup
Public Xgoa2opt

```

```

Do While .T.

```

```

* -- Screen Display A:Goal_2.Scr --

```

```

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Goal_2.Scr/"
Set Color To W+/B,W+/B
Xgoa2opt = 1
Do Headings
@ 22,67 Get Xgoa2opt Pict "9" Range 1,7
Read

```

```

* -- Allows nurse to select specific goal attainable
* -- by this patient --

```

```

Do Case

```

```

Case Xgoa2opt = 1
  Ngoal = "Communicates Needs Through Words"
  Do B:Norder2A
  Return

```

```

Case Xgoa2opt = 2
  Ngoal = "Comm Needs Through Mechanical Tools"
  Do B:Norder2A
  Return

```

Case Xgoa2opt = 3  
    Ngoal = "Demos Skills to Achieve Goals"  
    Do B:Norder2C  
    Return

Case Xgoa2opt = 4  
    @ 18,21 Get Gooath;  
    Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
    Read  
    Ngoal = Gooath  
    Do B:Norder2A  
    Return

Case Xgoa2opt = 5  
    Ngoal = "Reports Less Anxiety"  
    Do B:Norder2B  
    Return

Case Xgoa2opt = 6  
    Ngoal = "Reports Less Fear"  
    Do B:Norder2B  
    Return

Case Xgoa2opt = 7  
    Ngoal = "Reports Less Stress"  
    Do B:Norder2B  
    Return

Endcase  
Release Xgoa2opt

Enddo

```

***** NORDER2A.PRG *****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a pa-
* tient whose goal is communicates
* needs through use of words or
* mechanical tools.
* Input Files Used: Norder2A.Scr, Time, Emosup and
* Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_2.Prg
* Routine Called: None
* Modification Date: 3 February 1986

```

```

* -- Screen Input Program For Norder2A --

```

```

Do Setup
Public Xnord2aopt

```

```

Do While .T.

```

```

* -- Screen Display A:Norder2A.Scr --

```

```

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Norder2A.Scr/"
Set Color To W+/B,W+/B
Xnord2aopt = 01
Do Headings
@ 22,67 Get Xnord2aopt Pict "99" Range 1,10
Read

```

```

* -- Nursing orders are determined by evaluating the
* -- case statement, then place data into Ncaredb and
* -- Orders.Dbf files --

```

```

Do Case

```

```

Case Xnord2aopt = 1
Morder = "Apprise Others of Comm Prob"
Do B:Time
Do Replaord
Do Repnrord
Return

```



```

Case Xnord2aopt = 2
  Morder = "Provide Emotional Support"
  Do B:Emosup
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 3
  Morder = "Provide Paper and Pencil"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 4
  Morder = "Provide Spelling Board"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 5
  @ 18,11 Get Ordoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 6
  Morder = "Prov Translated Phase Chart"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 7
  Morder = "Provide Translator"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

```

```

Case Xnord2aopt = 8
  Morder = "Simple Questions w/ Y/N Ans"
  Do B:Time
  Do Replaord

```

```
Do Repnrord
Return

Case Xnord2aopt = 9
  Morder = "Use Sign Language"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord2aopt = 10
  Morder = "Use Establishd Comm for ADL"
  Do Replaord
  Do Repnrord
  Return

Endcase
Release Xnord2aopt

Enddo
```

\*\*\*\*\* NORDER2B.PRG \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
 \* Date: 23 December 1985  
 \* Screen Generated By: The Software Bottling Company  
 \* Of New York, c1985  
 \* Purpose: Provides a menu for the nurse to  
 \* select a nursing order for a  
 \* patient whose goal is reports de-  
 \* creased level of stress, anxiety  
 \* or fear.  
 \* Input Files Used: Norder2B.Scr, Time and Procfile.Prg  
 \* Output Files Used: Orders and Ncaredb.Dbf  
 \* Calling Routine: Goal\_2.Prg  
 \* Routine Called: None  
 \* Modification Date: 5 February 1986

\* -- Screen Input Program For Norder2B --

Do Setup  
 Public Xnord2bopt

Do While .T.

\* -- Screen Display A:Norder2B.Scr --

Set Color To W+/B,W+/B  
 Clear  
 ?? Flash+"S.A:Norder2B.Scr/"  
 Set Color To W+/B,W+/B  
 Xnord2bopt = 01  
 Do Headings  
 @ 22,66 Get Xnord2bopt Pict "99" Range 1,10  
 Read

\* -- Nursing orders are determined by evaluating the  
 \* -- case statement, then place data into Ncaredb and  
 \* -- Orders.Dbf files --

Do Case

Case Xnord2bopt = 1  
 Morder = "Encour Pt To Speak Slowly"  
 Do B:Time  
 Do Replaord  
 Do Repnrord  
 Return

Case Xnord2bopt = 2  
 Morder = "Encou To Util Cope Strategy"

```
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 3
Morder = "Explain Proc & Elicit Ques"
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 4
Morder = "Provide Spelling Board"
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 5
@ 18,10 Get Ordoth;
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
Read
Morder = Ordoth
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 6
Morder = "Prov Translated Phase Chart"
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 7
Morder = "Provide Translator"
Do B:Time
Do Replaord
Do Repnrord
Return
```

```
Case Xnord2bopt = 8
Morder = "Simple Questions w/ Y/N Ans"
Do B:Time
Do Replaord
Do Repnrord
Return
```

Case Xnord2bopt = 9  
Morder = "Use Sign Language"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord2bopt = 10  
Morder = "Use Establishd Comm for ADL"  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord2bopt

Enddo

```

***** NORDER2C.PRG *****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a pa-
* tient whose goal is demonstrates
* skills to achieve goals.
* Input Files Used: Norder2C.Scr, Teach & Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_2.Prg
* Routine Called: None
* Modification Date: 1 February 1986

```

```

* -- Screen Input Program For Norder2C --

```

```

Do Setup
Public Xnord2copt

```

```

Do While .T.

```

```

* -- Screen Display A:Norder2C.Scr --

```

```

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Norder2C.Scr/"
Set Color To W+/B,W+/B
Xnord2copt = 1
Do Headings
@ 22,67 Get Xnord2copt Pict "9" Range 1,9
Read

```

```

* -- Nursing orders are determined by evaluating the
* -- case statement, then place data into Ncaredb and
* -- Orders.Dbf files --

```

```

Do Case

```

```

Case Xnord2copt = 1
Morder = "Teach: Blink 1x No, 2x Yes"
Do B:Teach
Do Replaord
Do Repnrord
Return

```

```

Case Xnord2copt = 2
Morder = "Teach To Squeeze Hand 4 Y/N"
Do B:Teach

```

Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 3  
Morder = "Teach Use Of Mech Device"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 4  
Morder = "Apprise Others of Comm Prob"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 5  
@ 18,30 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 6  
Morder = "Teach: Deep Breathing Exer"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 7  
Morder = "Teach: Diversional Activity"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 8  
Morder = "Teach: Prog/sive Relaxation"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord2copt = 9  
Morder = "Teach: Relaxation Response"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord2copt

Enddo



\*\*\*\*\* ASSESS\_3.PRGR \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
 \* Date: 23 December 1985  
 \* Screen Generated By: The Software Bottling Company  
 \* Of New York, c1985  
 \* Purpose: Provides a menu for the nurse to  
 \* select nursing assessment for a  
 \* patient with a nursing diagnosis  
 \* of impaired physical mobility.  
 \* Input Files Used: Assess\_3.Scr and Procfile.Prg  
 \* Output Files Used: None  
 \* Calling Routine: N\_Diag.Prg  
 \* Routine Called: Relate\_3.Prg  
 \* Modification Date: 3 February 1986

\* -- Screen Input Program For Assess\_3 --

Do Setup  
 Public Xass3opt

Do While .T.

\* -- Screen Display A:Assess\_3.Scr --

Set Color To W+/B,W+/B  
 Clear  
 ?? Flash+"S.A:Assess\_3.Scr/"  
 Set Color To W+/B,W+/B  
 Xass3opt = 01  
 Do Headings  
 @ 22,66 Get Xass3opt Pict "99" Range 1,11  
 Read

\* -- Allows nurse to document assessment of the  
 \* -- patient --

Do Case

Case Xass3opt = 1  
 Nassess = "Confinement Imposed"  
 Do B:Relate\_3  
 Return

Case Xass3opt = 2  
 Nassess = "Fatigues Easily"  
 Do B:Relate\_3  
 Return

```
Case Xass3opt = 3
  Nassess = "Gait Impairment"
  Do B:Relate_3
  Return

Case Xass3opt = 4
  Nassess = "Impaired Coordination"
  Do B:Relate_3
  Return

Case Xass3opt = 5
  Nassess = "Inability to Ambulate"
  Do B:Relate_3
  Return

Case Xass3opt = 6
  @ 18,13 Get Assoth;
  Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Nassess = Assoth
  Do B:Relate_3
  Return

Case Xass3opt = 7
  Nassess = "Inability to Transfer"
  Do B:Relate_3
  Return

Case Xass3opt = 8
  Nassess = "Inability to Turn"
  Do B:Relate_3
  Return

Case Xass3opt = 9
  Nassess = "Limited Range Of Motion"
  Do B:Relate_3
  Return

Case Xass3opt = 10
  Nassess = "Reluctant To Move"
  Do B:Relate_3
  Return

Case Xass3opt = 11
  Nassess = "Use Of Assistive Devices"
  Do B:Relate_3
  Return

Endcase
Release Xass3opt
```

\*\*\*\*\* RELATE\_3.PRG \*\*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
 \* Date: 23 December 1985  
 \* Screen Generated By: The Software Bottling Company  
 \* Of New York, c1985  
 \* Purpose: Provides a menu for the nurse to  
 \* select related factors for a  
 \* patient with a nursing diagnosis  
 \* of impaired physical mobility.  
 \* Input Files Used: Relate\_3.Scr and Procfile.Prg  
 \* Output Files Used: None  
 \* Calling Routine: Assess\_3.Prg  
 \* Routine Called: Goal\_3.Prg  
 \* Modification Date: 3 February 1986

\* -- Screen Input Program For Relate\_3 --

Do Setup  
 Public Xrel3opt

Do While .I.

\* -- Screen Display A:Relate\_3.Scr --

Set Color To W+/B,W+/B  
 Clear  
 ?? Flash+"S.A:Relate\_3.Scr/"  
 Set Color To W+/B,W+/B  
 Xrel3opt = 01  
 Do Headings  
 @ 22,67 Get Xrel3opt Pict "9" Range 1,6  
 Read

\* -- Previous assessment is related to some cause --

Do Case

Case Xrel3opt = 1  
 Nrelate = "Decrease Act Tolerance"  
 Do B:Goal\_3  
 Return

Case Xrel3opt = 2  
 Nrelate = "Musculoskeletal Function"  
 Do B:Goal\_3  
 Return

Case Xrel3opt = 3  
 Nrelate = "Neuromuscular Function"

```

    Do B:Goal_3
    Return

Case Xrel3opt = 4
    Nrelate = "Pain / Discomfort"
    Do B:Goal_3
    Return

Case Xrel3opt = 5
    Nrelate = "Treatment Regime"
    Do B:Goal_3
    Return

Case Xrel3opt = 6
    @ 18,36 Get Reloth;
    Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXX"
    Read
    Nrelate = Reloth
    Do B:Goal_3
    Return

Endcase
Release %Xrel3opt

Enddo

```

\*\*\*\* GOAL\_3.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 23 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a patient goal for a  
\* patient with a nursing diagnosis  
\* of impaired physical mobility.  
\* Input Files Used: Goal\_3.Scr and Drproc.Prg  
\* Output Files Used: None  
\* Calling Routine: Relate\_3.Prg  
\* Routine Called: Norder3A, Norder3B, Norder3C,  
\* Norder3D or Norder3E.Prg  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Goal\_3 --

Do Setup  
Public Xgoa3opt

Do While .T.

\* -- Screen Display A:Goal\_3.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Goal\_3.Scr/"  
Set Color To W+/B,W+/B  
Xgoa3opt = 01  
Do Headings  
@ 22,66 Get Xgoa3opt Pict "99" Range 1,11  
Read

\* -- Allows nurse to select specific goal attainable  
\* -- by this patient --

Do Case

Case Xgoa3opt = 1  
Ngoal = "Able To Transfer Independently"  
Do B:Norder3D  
Return

Case Xgoa3opt = 2  
Ngoal = "Able To Transfer With Assistance"  
Do B:Norder3D  
Return

```

Case Xgoa3opt = 3
  Ngoal = "Demos Skills to Achieve Goals"
  Do B:Norder3E
  Return

Case Xgoa3opt = 4
  Ngoal = "Increase Range Of Motion (ROM)"
  Do B:Norder3A
  Return

Case Xgoa3opt = 5
  Ngoal = "Maint Effective Breathing Pattern"
  Do B:Norder3A
  Return

Case Xgoa3opt = 6
  @ 18,21 Get Gooath;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Ngoal = Gooath
  Do B:Norder3B
  Return

Case Xgoa3opt = 7
  Ngoal = "Maintains Full Range Of Motion (ROM)"
  Do B:Norder3A
  Return

Case Xgoa3opt = 8
  Ngoal = "Maintains Pattern Of Elimination"
  Do B:Norder3C
  Return

Case Xgoa3opt = 9
  Ngoal = "Maintains Skin Integrity"
  Do B:Norder3B
  Return

Case Xgoa3opt = 10
  Ngoal = "No Additional Contractures"
  Do B:Norder3A
  Return

Case Xgoa3opt = 11
  Ngoal = "Performs Activity Of Daily Living(ADL)"
  Do B:Norder3C
  Return

Endcase
Release Xgoa3opt

```

```

**** NORDER3A.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is maintains
* maintains full range of motion
* (ROM), increases ROM or no added
* contractures.
* Input Files Used: Norder3A.Scr, Time and Drproc.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_3.Prg
* Routine Called: None
* Modification Date: 5 February 1986
*
* -- Screen Input Program For Norder3A --
*
Do Setup
Public Xnord3aopt

Do While .T.

    * -- Screen Display A:Norder3A.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Norder3A.Scr/"
    Set Color To W+/B,W+/B
    Xnord3aopt = 1
    Do Headings
    @ 22,66 Get Xnord3aopt Pict "9" Range 1,10
    Read

    * -- Nursing orders are determined by evaluating the
    * -- case statement, then place data into Ncaredb and
    * -- Orders.Dbf files --

    Do Case

        Case Xnord3aopt = 1
            Morder = "Active Range Of Motion"
            Do B:Time
            Do Replaord
            Do Repnrord
            Return

```

```

Case Xnord3aopt = 2
  Morder = "Cough & Deep Breath"
  Do B:Time
  Do Cough
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 3
  Morder = "Encourage Independent ADL"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 4
  Morder = "Gradual Increase ADL Activity"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 5
  @ 18,10 Get Ordoth;
  Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 6
  Morder = "Passive Range Of Motion"
  Do B:Time
  Do Range
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 7
  Morder = "Positioning"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord3aopt = 8
  Morder = "Turning"
  Do B:Time

```



Do Replaord  
Do Repnrord  
Return

Case Xnord3aopt = 9  
Morder = "Accom Pt Off Wd (>15 <30mn)"  
Passdata = "QSS 2"  
Ptpoint = 2  
Do Replaord  
Do Repnrord  
Return

Case Xnord3aopt = 10  
Morder = "Accompy Pt Off Wd (>30 min)"  
Passdata = "QSS 3"  
Ptpoint = 4  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord3aopt

Enddo

```

**** NORDER3B.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Buttlng Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is maintains
* maintains skin integrity or
* selects other for the goal.
* Input Files Used: Norder3B.Scr, Time and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_3.Prg
* Routine Called: None
* Modification Date: 3 February 1986
*
* -- Screen Input Program For Norder3B --
*
Do Setup
Public Xnord3bopt

Do While .T.

    * -- Screen Display A:Norder3B.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Norder3B.Scr/"
    Set Color To W+/B,W+/B
    Xnord3bopt = 01
    Do Headings
    @ 22,66 Get Xnord3bopt Pict "99" Range 1,11
    Read

    * -- Nursing orders are determined by evaluating the
    * -- case statement, then place data into Ncaredb and
    * -- Orders.Dbf files --

    Do Case

        Case Xnord3bopt = 1
            Morder = "Ambulate"
            Do B:Time
            Do Replaord
            Do Repnrord
            Return

        Case Xnord3bopt = 2
            Morder = "Assist To Select Diet"

```

Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 3  
Morder = "Encourage Independent ADL"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 4  
Morder = "Massage-Promote Circulation"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 5  
Morder = "Possessions w/in Reach"  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 6  
@ 18,30 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 7  
Morder = "Position"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 8  
Morder = "Protect Bony Prominences"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 9  
Morder = "Protect Pressure Areas"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 10  
Morder = "Provide Safe Environment"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3bopt = 11  
Morder = "Siderails"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord3bopt

Enddo

```

**** NORDER3C.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is maintains
* pattern of elimination or per-
* forms activities of daily living
* (ADL).
* Input Files Used: Norder3C.Scr, Time and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_3.Prg
* Routine Called: None
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Norder3C --
*
Do Setup
Public Xnord3copt

Do While .T.

    * -- Screen Display A:Norder3C.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Norder3C.Scr/"
    Set Color To W+/B,W+/B
    Xnord3copt = 1
    Do Headings
    @ 22,67 Get Xnord3copt Pict "9" Range 1,8
    Read

    * -- Nursing orders are determined by evaluating the
    * -- case statement, then place data into Ncaredb and
    * -- Orders.Dbf files --

    Do Case

        Case Xnord3copt = 1
            Morder = "Ambulate with Assistance"
            Do B:Time

            Do Case
                Case (Timeopt < 5 .Or. Timeopt = 41)
                    * -- No precise frequency given
                    Passdata = "Q51 18"

```

```

    Ptpoint = 0
    Case (Timeopt > 4 .And. Timeopt < 22)
        * -- X 1
        Passdata = "Q51 11"
        Ptpoint = 2
    Case (Timeopt > 21 .And. Timeopt < 25)
        * -- X 2 or BID
        Passdata = "Q51 12"
        Ptpoint = 4
    Case (Timeopt > 24 .And. Timeopt < 31)
        * -- X 3 or IID
        Passdata = "Q51 13"
        Ptpoint = 6
    Case (Timeopt > 30 .And. Timeopt < 34)
        * -- X 4 or QID
        Passdata = "Q51 14"
        Ptpoint = 8
    Case (Timeopt = 34 .Or. Timeopt = 35)
        * -- X 6 or Q4h
        Passdata = "Q51 15"
        Ptpoint = 12
    Case (Timeopt = 36 .Or. Timeopt = 37)
        * -- X 12 or Q2h
        Passdata = "Q51 16"
        Ptpoint = 24
    Case (Timeopt = 38 .Or. Timeopt = 39)
        * -- X 24 or Q1h
        Passdata = "Q51 17"
        Ptpoint = 48

```

Endcase

```

Do Replaord
Do Repnrord
Return

```

```

Case Xnord3copt = 2
    Morder = "Increase Independ Doing ADL"
    Do Replaord
    Do Repnrord
    Return

```

```

Case Xnord3copt = 3
    Morder = "Plan For Continuing Care"
    Do Replaord
    Do Repnrord
    Return

```

```

Case Xnord3copt = 4
    Morder = "Position"
    Do B:Time

```

Do Replaord  
Do Repnrord  
Return

Case Xnord3copt = 5  
@ 18,29 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3copt = 6  
Morder = "Range Of Motion (ROM)"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3copt = 7  
Morder = "Diet To Promote GI Function"  
Do Replaord  
Do Repnrord  
Return

Case Xnord3copt = 8  
Morder = "Turn"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord3copt

Enddo

```

**** NORDER3D.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is able to
* transfer independently or with
* assistance.
* Input Files Used: Norder3D.Scr, Time and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_3.Prg
* Routine Called: None
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Norder3D --
*
Do Setup
Public Xnord3dopt

Do While .T.

    * -- Screen Display A:Norder3D.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.F. Norder3D.Scr/"
    Set Color To w+/B,w+/B
    Xnord3dopt = 1
    Do Headings
    @ 22,67 Get Xnord3dopt Pict "9" Range 1,5
    Read

    * -- Nursing orders are determined by evaluating the
    * -- case statement, then place data into Ncaredb and
    * -- Orders.Dbf files --

    Do Case

        Case Xnord3dopt = 1
            Morder = "Assist Bed To Chair"
            Do B:Time

            Do Case
                Case (Timeopt < 25 .Or. Timeopt = 41)
                    * -- Less than x 3 or IID
                    Passdata = "Q51 1"
                    Ptpoint = 0

```



```

Case [Timeopt > 24 .And. Timeopt < 34]
  * -- X 3 or less than Q4h [x 6]
  Passdata = "Q51 7"
  Ptpoint = 2
Case [Timeopt = 34 .Or. Timeopt = 35]
  * -- X 6 or Q4h
  Passdata = "Q51 8"
  Ptpoint = 4
Case [Timeopt = 36 .Or. Timeopt = 37]
  * -- X 12 or Q2h
  Passdata = "Q51 9"
  Ptpoint = 8
Case [Timeopt = 38 .Or. Timeopt = 39]
  * -- X 24 or Q1h
  Passdata = "Q51 10"
  Ptpoint = 16
Endcase

```

```

Do Replaord
Do Repnrord
Return

```

```

Case Xnord3dopt = 2
  Morder = "Assist Bed To Wheelchair"
  Do B:Time

  Do Case
    Case [Timeopt < 25 .Or. Timeopt = 41]
      * -- Less than x 3 or IID
      Passdata = "Q51 1"
      Ptpoint = 0
    Case [Timeopt > 24 .And. Timeopt < 34]
      * -- X 3 or less than Q4h [x 6]
      Passdata = "Q51 7"
      Ptpoint = 2
    Case [Timeopt = 34 .Or. Timeopt = 35]
      * -- X 6 or Q4h
      Passdata = "Q51 8"
      Ptpoint = 4
    Case [Timeopt = 36 .Or. Timeopt = 37]
      * -- X 12 or Q2h
      Passdata = "Q51 9"
      Ptpoint = 8
    Case [Timeopt = 38 .Or. Timeopt = 39]
      * -- X 24 or Q1h
      Passdata = "Q51 10"
      Ptpoint = 16
  Endcase

```

Do Replaord  
Do Repnrord  
Return

Case Xnord3dopt = 3  
@ 18,29 Get Ordoth;  
Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do Replaord  
Do Repnrord  
Return

Case Xnord3dopt = 4  
Morder = "Provide Helping Person"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3dopt = 5  
Morder = "Provide Mechanical Aid"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord3dopt

Enddo

\*\*\*\* NORDER3E.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 23 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a nursing order for a pa-  
\* tient whose goal is demonstrates  
\* skills to achieve goals.  
\* Input Files Used: Norder3E.Scr, Time, Teach and  
\* Procfile.Prg  
\* Output Files Used: Orders and Ncaredb.Dbf  
\* Calling Routine: Goal\_3.Prg  
\* Routine Called: None  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Norder3E --

Do Setup  
Public Xnord3eopt

Do While .T.

\* -- Screen Display A:Norder3E.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Norder3E.Scr/"  
Set Color To J+/B,W+/B  
Xnord3eopt = 1  
Do Headings  
@ 22,67 Get Xnord3eopt Pict "9" Range 1,6  
Read

\* -- Nursing orders are determined by evaluating the  
\* -- case statement, then place data into Ncaredb and  
\* -- Orders.Dbf files --

Do Case

Case Xnord3eopt = 1  
Morder = "Provide Opport To Prac Skil"  
Do B:Time  
Do Replaord  
Do Reprnord  
Return

Case Xnord3eopt = 2  
Morder = "Teach Factor-Impair Moblity"

Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord3eopt = 3  
Morder = "Teach Rationale For Skills"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord3eopt = 4  
@ 18,29 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord3eopt = 5  
Morder = "Teach Required Exercise"  
Do B:Teach  
Do Replaord  
Do Repnrord  
Return

Case Xnord3eopt = 6  
Morder = "Teach Use Of Adjuncts/Aids"  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord3eopt

Enddo

```

**** ASSESS_4.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select nursing assessment for a
* patient with a nursing diagnosis
* of self-care deficit.
* Input Files Used: Assess_4.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: N_Diag.Prg
* Routine Called: Relate_4.Prg
* Modification Date: 3 February 1986

```

```

* -- Screen Input Program For Assess_4 --

```

```

Do Setup
Public Xass4opt

```

```

Do While .T.

```

```

* -- Screen Display A:Assess_4.Scr --

```

```

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Assess_4.Scr/"
Set Color To W+/B,W+/B
Xass4opt = 01
Do Headings
@ 22,66 Get Xass4opt Pict "99" Range 1,14
Read

```

```

* -- Allows nurse to document assessment of the
* -- patient --

```

```

Do Case

```

```

Case Xass4opt = 1
Nassess = "Unable To Cloth Self"
Do B:Relate_4
Return

```

```

Case Xass4opt = 2
Nassess = "Unable To Cut Food"
Do B:Relate_4
Return

```

```

Case Xass4opt = 3
  Nassess = "Unable To Drink"
  Do B:Relate_4
  Return

Case Xass4opt = 4
  Nassess = "Unable To Fasten Clothes"
  Do B:Relate_4
  Return

Case Xass4opt = 5
  Nassess = "Unable To Feed Self"
  Do B:Relate_4
  Return

Case Xass4opt = 6
  @ 18,24 Get Assoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Nassess = Assoth
  Do B:Relate_4
  Return

Case Xass4opt = 7
  Nassess = "Unable To Get To Bathroom"
  Do B:Relate_4
  Return

Case Xass4opt = 8
  Nassess = "Unable To Maint Appearance"
  Do B:Relate_4
  Return

Case Xass4opt = 9
  Nassess = "Unable To Select Clothes"
  Do B:Relate_4
  Return

Case Xass4opt = 10
  Nassess = "Unable To Sit On Toilet"
  Do B:Relate_4
  Return

Case Xass4opt = 11
  Nassess = "Unable To Do Toilet Hygiene"
  Do B:Relate_4
  Return

Case Xass4opt = 12
  Nassess = "Unable To Rise Off Toilet"

```

Do B:Relate\_4  
Return

Case Xass4opt = 13  
Nassess = "Unable To Do Flush Toilet"  
Do B:Relate\_4  
Return

Case Xass4opt = 14  
Nassess = "Unable To Wash Self"  
Do B:Relate\_4  
Return

Endcase  
Release Xass4opt

Enddo

\*\*\*\* RELATE\_4.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 23 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select related factors for a  
\* patient with a nursing diagnosis  
\* of self care: deficit.  
\* Input Files Used: Relate\_4.Scr and Procfile.Prg  
\* Output Files Used: None  
\* Calling Routine: Assess\_4.Prg  
\* Routine Called: Goal\_4.Prg  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Relate\_4 --

Do Setup  
Public Xrel4opt

Do While .I.

\* -- Screen Display A:Relate\_4.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Relate\_4.Scr/"  
Set Color To W+/B,W+/B  
Xrel4opt = 01  
Do Headings  
@ 22,66 Get Xrel4opt Pict "99" Range 1,10  
Read

\* -- Previous assessment is related to some cause --

Do Case

Case Xrel4opt = 1  
Nrelate = "Activity Intolerance"  
Do B:Goal\_4  
Return

Case Xrel4opt = 2  
Nrelate = "Depression"  
Do B:Goal\_4  
Return

Case Xrel4opt = 3  
Nrelate = "Developmental Phase"



```

    Do B:Goal_4
    Return

Case Xrel4opt = 4
    Nrelate = "Musculoskeletal Function"
    Do B:Goal_4
    Return

Case Xrel4opt = 5
    @ 17,14 Get Reloth;
    Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXX"
    Read
    Nrelate = Reloth
    Do B:Goal_4
    Return

Case Xrel4opt = 6
    Nrelate = "Neuromuscular Impairment"
    Do B:Goal_4
    Return

Case Xrel4opt = 7
    Nrelate = "Pain / Discomfort"
    Do B:Goal_4
    Return

Case Xrel4opt = 8
    Nrelate = "Perceptual Impairment"
    Do B:Goal_4
    Return

Case Xrel4opt = 9
    Nrelate = "Sensory Impairment"
    Do B:Goal_4
    Return

Case Xrel4opt = 10
    Nrelate = "Severe Anxiety"
    Do B:Goal_4
    Return

Endcase
Release Xrel4opt

Enddo

```

```

**** GOAL_4.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a patient goal for a
* patient with a nursing diagnosis
* of self-care: deficit.
* Input Files Used: Goal_4.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Relate_4.Prg
* Routine Called: Norder4A, Norder4B, Norder4C,
* Norder4D or Norder4E.Prg
* Modification Date: 25 January 1986
*
* -- Screen Input Program For Goal_4 --
*
Do Setup
Public Xgoal4opt,Xgoal4cur
Xgoal4cur = Space(1)

Do While .T.

* -- Screen Display A:Goal_4.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S:A:Goal_4.Scr/"
Set Color To W+/B,W+/B
Xgoal4opt = 1
Do Headings
@ 21,67 Get Xgoal4opt Pict "9" Range 1,5
Read

* -- Allows nurse to select specific goal attainable
* -- by this patient and current level of care the
* -- the patient requires --

Do Case

Case Xgoal4opt = 1
Ngoal = "Func @ Level 0, Full Self Care"
Do Current
Do Replaord
Do B:Norder4A
Return

```

```
Case Xgoa4opt = 2
  Ngoal = "Func @ Level 1, Use Of Equip/Device"
  Do Current
  Do Replaord
  Do B:Norder4B
  Return
```

```
Case Xgoa4opt = 3
  Ngoal = "Func @ Level 2, Needs Assist/Supervis"
  Do Current
  Do Replaord
  Do B:Norder4C
  Return
```

```
Case Xgoa4opt = 4
  Ngoal = "Func @ Level 3 Needs Assist/Use Device"
  Do Current
  Do Replaord
  Do B:Norder4D
  Return
```

```
Case Xgoa4opt = 5
  Ngoal = "Func @ Level 4 Dependent/No Participtn"
  Do Current
  Do Replaord
  Do B:Norder4E
  Return
```

```
Endcase
Release Xgoa4opt,Xgoa4cur
```

```
Enddo
```

```

**** NORDER4A.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is functions
* at level 0: full self care.
* Input Files Used: Norder4A.Scr, Time and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_4.Prg
* Routine Called: None
* Modification Date: 3 February 1986
*
* -- Screen Input Program For Norder4A --
*
Do Setup
Public Xnord4aopt

Do While .T.

* -- Screen Display A:Norder4A.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Norder4A.Scr/"
Set Color To W+/B,W+/B
Xnord4aopt = 1
Do Headings
@ 22,67 Get Xnord4aopt Pict "9" Range 1,3
Read

* -- Nursing orders are determined by evaluating the
* -- case statement, then place data into Ncaredb and
* -- Orders.Dbf files --

Do Case

Case Xnord4aopt = 1
Morder = "Supprt Increase Indep In ADL"
Do Replaord
Do Repnrord
Return

Case Xnord4aopt = 2
Morder = "Peds Recreation/Observation"
Passdata = "Q26 1"
Ptpoint = 8

```

Do Replaord  
Do Repnrord  
Return

Case Xnord4aopt = 3  
@ 17,42 Get Ordoth;  
Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord4aopt

Enddo

```

**** NORDER4B.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is functions
* at level 1: needs equipment or
* device.
* Input Files Used: Norder4B.Scr, Time and Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_4.Prg
* Routine Called: None
* Modification Date: 3 February 1986
*
* -- Screen Input Program For Norder4B --
*
Do Setup
Public Xnord4bopt

Do While .T.

    * -- Screen Display A:Norder4B.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.A:Norder4B.Scr/"
    Set Color To W+/B,W+/B
    Xnord4bopt = 1
    Do Headings
    @ 22,67 Get Xnord4bopt Pict "9" Range 1,8
    Read

    * -- Nursing orders are determined by evaluating the
    * -- case statement, then place data into Ncaredb and
    * -- Orders.Dbf files --

    Do Case

        Case Xnord4bopt = 1
            Morder = "Provide Equip For Bathing"
            Do B:Time
            Do Replaord
            Do Repnrord
            Return

        Case Xnord4bopt = 2
            Morder = "Provide Equip For Dressing"

```

Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 3  
Morder = "Provide Equip For Feeding"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 4  
@ 18,11 Get Ordoth;  
Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXXX"  
Read  
Morder = Ordoth  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 5  
Morder = "Provide Equip For Toileting"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 6  
Morder = "Peds Recreation/Observation"  
Passdata = "Q26 1"  
Ptpoint = 8  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 7  
Morder = "Spoon Feed Patient"  
Passdata = "Q28 1"  
Ptpoint = 6  
Do Replaord  
Do Repnrord  
Return

Case Xnord4bopt = 8  
Morder = "Spoon Feed Child"  
Passdata = "Q28 2"  
Ptpoint = 10  
Do Replaord

Do Repnrord  
Return

Endcase  
Release Xnord4bapt

Enddo



\*\*\*\* NORDER4C.PRG \*\*\*\*

```
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 23 December 1985
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Provides a menu for the nurse to
* select a nursing order for a
* patient whose goal is functions
* at level 2: needs assistance,
* supervision or other.
* Input Files Used: Norder4C.Scr, Time, Emosup and
* Procfile.Prg
* Output Files Used: Orders and Ncaredb.Dbf
* Calling Routine: Goal_4.Prg
* Routine Called: None
* Modification Date: 3 February 1986
```

\* -- Screen Input Program For Norder4C --

```
Do Setup
Public Xnord4copt
```

Do While .T.

\* -- Screen Display A:Norder4C.Scr --

```
Set Color To W+/B,W+/B
Clear
?? Flash+"S.A:Norder4C.Scr/"
Set Color To W+/B,W+/B
Xnord4copt = 01
Do Headings
@ 22,66 Get Xnord4copt Pict "99" Range 1,16
Read
```

```
* -- Nursing orders are determined by evaluating the
* -- case statement, then place data into Ncaredb and
* -- Orders.Dbf files --
```

Do Case

```
Case Xnord4copt = 1
Morder = "Assist To Dress"
Do B:Time
Do Replaord
Do Repnrord
Return
```

```

Case Xnord4copt = 2
  Morder = "Assist To/From Bathroom"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 3
  Morder = "Assist With Partial Bath"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 4
  Morder = "Assist To Comb/Brush Hair"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 5
  Morder = "Dress Patient"
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 6
  @ 18,12 Get Ordoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 7
  Morder = "Feed Patient"
  Passdata = "Q28 1"
  Ptpoint = 6
  Do Replaord
  Do Repnrord
  Return

Case Xnord4copt = 8
  Morder = "Give Emotional Support"
  Do B:Emosup
  Do Replaord

```

Do Repnrord  
Return

Case Xnord4copt = 9  
Morder = "Give Complete Bath"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 10  
Morder = "Keep Cammode @ Bedside"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 11  
Morder = "Keep Urinal/Bedpan Near"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 12  
Morder = "Peds Recreation/Observation"  
Passdata = "Q26 1"  
Ptpoint = 8  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 13  
Morder = "Set Up Food Tray"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 14  
Morder = "Shave Patient"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4copt = 15  
Morder = "Socialize During Meals"  
Do Replaord

Do Repnrord  
Return

Case Xnord4copt = 16  
Morder = "Spoon Feed Child"  
Passdata = "Q28 2"  
Ptpoint = 10  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord4copt

Enddo

\*\*\*\* NORDER4D.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 23 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a nursing order for a  
\* patient whose goal is functions  
\* at level 3: needs assistance and  
\* uses equipment.  
\* Input Files Used: Norder4C.Scr, Time, Emosup and  
\* Procfile.Prg  
\* Output Files Used: Orders and Ncaredb.Dbf  
\* Calling Routine: Goal\_4.Prg  
\* Routine Called: None  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Norder4D --

Do Setup  
Public Xnord4dopt

Do While .T.

\* -- Screen Display A:Norder4D.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Norder4D.Scr/"  
Set Color To W+/B,W+/B  
Xnord4dopt = 01  
Do Headings  
@ 22,66 Get Xnord4dopt Pict "99" Range 1,16  
Read

\* -- Nursing orders are determined by evaluating the  
\* -- case statement, then place data into Ncaredb and  
\* -- Orders.Dbf files --

Do Case

Case Xnord4dopt = 1  
Morder = "Assist To Dress"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

```

Case Xnord4dopt = 2
  Morder = "Assist To/From Bathroom"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 3
  Morder = "Assist With Partial Bath"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 4
  Morder = "Assist To Comb/Brush Hair"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 5
  Morder = "Dress Patient"
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 6
  @ 18,12 Get Ordoth;
  Pict "XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 7
  Morder = "Feed Patient"
  Passdata = "Q28 1"
  Ptpoint = 6
  Do Replaord
  Do Repnrord
  Return

Case Xnord4dopt = 8
  Morder = "Give Emotional Support"
  Do B:Emosup
  Do Replaord

```

Do Repnrord  
Return

Case Xnord4dopt = 9  
Morder = "Give Complete Bath"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 10  
Morder = "Keep Commode @ Bedside"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 11  
Morder = "Keep Urinal/Bedpan Near"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 12  
Morder = "Provide Necessary Equipment"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 13  
Morder = "Provide For Hygiene"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 14  
Morder = "Set Up Food Tray"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4dopt = 15  
Morder = "Spoon Feed Child"  
Passdata = "Q28 2"  
Ptpoint = 10  
Do Replaord

Do Repnrord  
Return

Case Xnord4dopt = 16  
Morder = "Peds Recreation/Observation"  
Passdata = "Q26 1"  
Ptpoint = 8  
Do Replaord  
Do Repnrord  
Return

Endcase  
Release Xnord4dopt

Endda



\*\*\*\* NORDER4E.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 23 December 1985  
\* Screen Generated By: The Software Bottling Company  
\* OF New York, c1985  
\* Purpose: Provides a menu for the nurse to  
\* select a nursing order fo. a  
\* patient whose goal is functions  
\* at level 4: dependent and does  
\* not participate in care.  
\* Input Files Used: Norder4E.Scr, Time, Emosup and  
\* Procfile.Prg  
\* Output Files Used: Orders and Ncaredb.Dbf  
\* Calling Routine: Goal\_4.Prg  
\* Routine Called: None  
\* Modification Date: 3 February 1986

\* -- Screen Input Program For Norder4E --

Do Setup  
Public Xnord4eopt

Do While .T.

\* -- Screen Display A:Norder4E.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.A:Norder4E.Scr/"  
Set Color To W+/B,W+/B  
Xnord4eopt = 01  
Do Headings  
@ 22,66 Get Xnord4eopt Pict "99" Range 1,16  
Read

\* -- Nursing orders are determined by evaluating the  
\* -- case statement, then place data into Ncaredb and  
\* -- Orders.Dbf files --

Do Case

Case Xnord4eopt = 1  
Morder = "Assist To/From Bathroom"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

```

Case Xnord4eopt = 2
  Morder = "Assist To/From Commode"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 3
  Morder = "Assist To Comb/Brush Hair"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 4
  Morder = "Dress Patient"
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 5
  Morder = "Feed Patient"
  Passdata = "Q28 1"
  Ptpoint = 6
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 6
  @ 18,12 Get Ordoth;
  Pict "!XXXXXXXXXXXXXXXXXXXXXXXXXXXX"
  Read
  Morder = Ordoth
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 7
  Morder = "Give Complete Bath"
  Do B:Time
  Do Replaord
  Do Repnrord
  Return

Case Xnord4eopt = 8
  Morder = "Give Emotional Support"
  Do B:Emosup
  Do Replaord

```

Do Repnrord  
Return

Case Xnord4eopt = 9  
Morder = "Provide For Oral Hygiene"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 10  
Morder = "Provide For Personal Hygene"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 11  
Morder = "Provide Urinal/Bedpan"  
Do B:Time  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 12  
Morder = "Spoon Feed Child"  
Passdata = "Q28 2"  
Ptpoint = 10  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 13  
Morder = "Other Activity (>15 <30min)"  
Passdata = "Q56 2"  
Ptpoint = 2  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 14  
Morder = "Other Activity (>30min)"  
Passdata = "Q56 3"  
Ptpoint = 4  
Do Replaord  
Do Repnrord  
Return

Case Xnord4eopt = 15  
Morder = "Special Procedure (>1 <2hr)"

Passdata = "Q56 4"

Ptpoint = 8

Do Replaord

Do Repnrord

Return

Case Xnord4eopt = 16

Morder = "Xtra Linen Chge/Partial Bath"

Do B:Time

Do Case

Case (Timeopt < 34 .Or. Timeopt = 41)

\* -- Less than x 6 per day

Passdata = "Q24 1"

Ptpoint = 0

Case (Timeopt = 34 .Or. Timeopt = 35)

\* -- x 2 per shift or x 6 per day

Passdata = "Q24 2"

Ptpoint = 4

Case (Timeopt = 36 .Or. Timeopt = 37)

\* -- x 4 per shift or x 12 per day

Passdata = "Q24 3"

Ptpoint = 8

Case (Timeopt = 38 .Or. Timeopt = 39)

\* -- x 8 per shift or x 24 per day

Passdata = "Q24 4"

Ptpoint = 16

Endcase

Do Replaord

Do Repnrord

Return

Endcase

Release Xnord4eopt

Enddo

```

**** INACTIVE.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 8 January 1986
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Displays the patient's nursing care
* plan and allows it to be modified
* by inactivating portions of it.
* Input Files Used: Inactive.Scr and Procfile.Prg
* Output Files Used: Ncaredb.Dbf
* Calling Routine: Nurse1.Prg
* Routine Calls: None
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Inactive --
*
Do Setup
Public Xinaopt,Xidate,Xitime,Xinurse,Xnpack
Public Xiemo,Xifreq,Xmptfmpssn,Xidiag,Xmord
Public Xigoal,Xiassess,Xirelate,Xiord
Xnpack = .F.

* -- Identify correct patient and isolate the nursing
* -- care plan --

Use B:Ncaredb
Store "" + Ptfmpssn + "" To Xmptfmpssn
Locate For Nfmpssn = &Xmptfmpssn

Do While .T.

* -- Store data from Dbf file into variable names --

Xidate = Ndate
Xitime = Ntime
Xinurse = Nurse
Xiemo = Emotea
Xifreq = Nfreq
Xidiag = Ndiag
Xigoal = Goal
Xiassess = Assess
Xirelate = Relate
Xiord = Nord

* -- Screen Display B:Inactive.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S.B:Inactive.Scr/"

```

```

Set Color To W+/B,W+/B
Do Headings
Xinaopt = 1
@ 13,1 Say Xitime
@ 13,9 Say Xidate
@ 13,18 Say Xidiag
@ 13,46 Say Xiassess
@ 14,1 Say Xirelate
@ 14,27 Say Xigoal
@ 15,1 Say Xiord
@ 15,28 Say Xifreq
@ 15,41 Say Xiemo
@ 15,61 Say Xinurse
@ 22,67 Get Xinaopt Pict "9" Range 0,4
Read

```

\* -- Evaluate action based on the option selected --

Do Case

```

Case Xinaopt = 0
* -- Sign-Off
If Xnpack = .I.
Pack
Endif
Close Databases
Close Procedure
Release All
Return To Master

```

```

Case Xinaopt = 1
* -- Next Plan
Skip
Do While (Nfmpssn # &Xmptfmpssn)
IF EOF()
Nmenu = "1"
@ 24,5 Say "No Additional Care Plans On This "
@ 24,38 Say "Patient -- Press Any Key To "
@ 24,66 Say "Continue"
Set Console Off
Wait
Set Console On
If Xnpack = .I.
Pack
Endif
Return
Else
Skip
Endif
Enddo

```

```

IF EOF ( )
  Nmenu ="1"
  @ 24,5 Say "No Additional Care Plans On This "
  @ 24,38 Say "Patient -- Press Any Key To "
  @ 24,66 Say "Continue"
  Set Console Off
  Wait
  Set Console On
  IF Xnpack = .T.
    Pack
  Endif
  Return
Else
  Loop
Endif

Case Xinaopt = 2
  * -- Inactivate Plan
  Xnpack = .T.
  Store "" + Xiord + "" To Xmord

  * -- Remove corresponding order from Orders.Dbf

  Use B:Orders
  Locate For [Fmpssn=&Xmptfmpssn .And. Order=&Xmord]
  Delete
  Pack

  * -- Remove nursing care plan data from Ncaredb.Dbf

  Use B:Ncaredb
  Delete
  Skip
  Do While [Nfmpssn # &Xmptfmpssn]
    IF EOF( )
      Nmenu ="1"
      @ 24,5 Say "No Additional Care Plans On This "
      @ 24,38 Say "Patient -- Press Any Key To "
      @ 24,66 Say "Continue"
      Set Console Off
      Wait
      Set Console On
      Pack
      Return
    Else
      Skip
    Endif
  Enddo
  IF EOF ( )
    Nmenu ="1"

```

```

@ 24,5 Say "No Additional Care Plans On This "
@ 24,38 Say "Patient -- Press Any Key To "
@ 24,66 Say "Continue"
Set Console Off
Wait
Set Console On
Pack
Return
Else
Loop
Endif

Case Xinaopt = 3
* -- Nurse Master
If Xnpack = .I.
Pack
Endif
Nmenu ="1"
Return

Case Xinaopt = 4
* -- Master
If Xnpack = .I.
Pack
Endif
Nmenu =" "
Return

Endcase
Release Xinaopt,Xidate,Xitime,Xinurse,Xnpack
Release Xiemo,Xifreq,Xmptfmpssn,Xidiag,Xmord
Release Xigoal,Xiassess,Xirelate,Xiord

Enddo

```



```

**** ADDELETE.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 9 January 1986
* Screen Generated By: The Software Bottling Company
* Of New York, c1985
* Purpose: Allows the data processing person-
* nel to choose to add or delete a
* user.
* Input Files Used: Addelete.Scr and Procfile.Prg
* Output Files Used: None
* Calling Routine: Master.Prg
* Routine Calls: Useinfo or Delete.Prg
* Modification Date: 25 January 1986
*
* -- Screen Input Program For Addelete --
*
Do Setup
Public Xaddelopt

Do While .T.

    * -- Screen Display B:Addelete.Scr --

    Set Color To W+/B,W+/B
    Clear
    ?? Flash+"S.B:Addelete.Scr/"
    Set Color To W+/B,W+/B
    Xaddelopt = 0
    @ 22,67 Get Xaddelopt Pict "9" Range 0,2
    Read

    * -- Evaluate action based on the option selected --

Do Case

    Case Xaddelopt = 0
        * -- Sign-Off
        Close Databases
        Close Procedure
        Release All
        Return To Master

    Case Xaddelopt = 1
        * -- Add A User
        Do B:Useinfo
        Loop

    Case Xadmitopt = 2
        * -- Delete A User

```

Do B:Delete  
Loop

Endcase  
Release Xaddelopt

Enddo

```

**** USEINFO.PRG ****
* Author: Gary R. Harmeyer LCDR NC USN
* Date: 12 December 1985
* Screen Generated By: The Software Bottling Company
* OF New York, c1985
* Purpose: Allow data processing personnel to
* add new user.
* Input Files Used: Useinfo.Scr and Procfile.Prg
* Output Files Used: Useinfo.Dbf
* Calling Routine: Addelete.Prg
* Routine Called: None
* Modification Date: 4 February 1986
*
* -- Screen Input Program For Useinfo --
*
Do Setup
Public Xufinitial,Xuminitial,Xulname
Public Xrequestor,Xcodeword,Xaccess
Xufinitial = " "+Space(0)
Xuminitial = Space(3)
Xulname = Space(12)
Xrequestor = Space(3)
Xcodeword = Space(5)
Xaccess = 3

Do While .T.

* -- Screen Display B:Useinfo.Scr --

Set Color To W+/B,W+/B
Clear
?? Flash+"S.B:Useinfo.Scr/"
Set Color To W+/B,W+/B
@ 9,43 Get Xufinitial Pict "!, "
@ 11,43 Get Xuminitial Pict "!!!"
@ 13,43 Get Xulname Pict "!XXXXXXXXXX"
@ 16,43 Get Xrequestor Pict "!!!"
@ 18,43 Get Xcodeword Pict "!!!!!"
@ 20,43 Get Xaccess Pict "9" Range 0,4
Read

Use B:Useinfo
Do While .Not. EOF()
Skip
Enddo
Append Blank

* -- Put data from variable names into Dbf file --

```

Replace Uinitial With Xuinitial  
Replace Uinitial With Xuinitial  
Replace Ulname With Xulname  
Replace Requestor With Xrequestor  
Replace Codeword With Xcodeword  
Replace Access With Xaccess

Return  
Release Xuinitial,Xuinitial,Xulname  
Release Xrequestor,Xcodeword,Xaccess

Enddo

\*\*\*\* DELETE.PRG \*\*\*\*

\* Author: Gary R. Harmeyer LCDR NC USN  
\* Date: 9 January 1986  
\* Screen Generated By: The Software Bottling Company  
\* Of New York, c1985  
\* Purpose: Delete a user.  
\* Input Files Used: Delete.Scr and Procfile.Prg  
\* Output Files Used: Useinfo.Dbf  
\* Calling Routine: Addelete.Prg  
\* Routine Calls: None  
\* Modification Date: 4 February 1986

\* -- Screen Input Program For Delete --

Do Setup

Public Xdelopt,Xdlulname,Xdlufinit,Xdluminit  
Public Xdlreq,Xdlacc,Xusepack  
Xusepack = .F.

Do While .T.

\* -- Store data from Dbf file into variable names --

Use B:Useinfo  
Xdlulname = Ulname  
Xdlufinit = Ufinit  
Xdluminit = Uminit  
Xdlreq = Requestor  
Xdlacc = Access

\* -- Screen Display B:Delete.Scr --

Set Color To W+/B,W+/B  
Clear  
?? Flash+"S.B:Delete.Scr/"  
Set Color To W+/B,W+/B  
Xdelopt = 1  
@ 13,5 Say Xdlulname  
@ 13,19 Say Xdlufinit  
@ 13,22 Say Xdluminit  
@ 13,39 Say Xdlreq  
@ 13,66 Say Xdlacc  
@ 22,67 Get Xdelopt Pict "9" Range 0,3  
Read

\* -- Evaluate action based on the option selected --

Do Case

```

Case Xdischopt = 0
* -- Sign-Off
  If Xusepack = .I.
    Pack
  Endif
  Close Databases
  Close Procedure
  Release All
  Return To Master

Case Xdischopt = 1
* -- Next User
  Skip
  If EOF ( )
    @ 24,15 Say "No Additional Users -- Press "
    @ 24,44 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    If Xusepack = .I.
      Pack
    Endif
    Return
  Else
    Loop
  Endif

Case Xdischopt = 2
* -- Delete User
  Xusepack = .I.
  Delete
  Skip
  If EOF ( )
    @ 24,15 Say "No Additional Users -- Press "
    @ 24,44 Say "Any Key To Continue"
    Set Console Off
    Wait
    Set Console On
    Pack
    Return
  Else
    Loop
  Endif

Case Xdischopt = 3
* -- Return To Add/Delete Screen
  If Xusepack = .I.
    Pack
  Endif

```

Close Databases  
Return

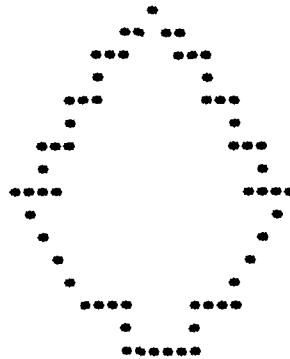
Endcase  
Release Xdelopt,Xdlulname,Xdlufinit,Xdluminit  
Release Xdlreq,Xdlacc,Xusepack

Endda

APPENDIX F  
PROGRAM SCREENS

---

A PROTOTYPE  
PROJECT  
FOR  
THE  
NAVY NURSE CORPS



BY  
GARY R. HARMEYER  
LCDR NC USN  
MARCH 1986  
NAVAL POSTGRADUATE SCHOOL  
MONTEREY, CALIFORNIA  
RELEASE 1

PRESS ANY KEY TO BEGIN

---

Figure 1



---

\*\*\* Please Sign On By Entering Password \*\*\*

---

\*\* Password :

---

Figure 1a

---

** Prototype Master Screen **	Date	Time
*** Select the Desired Option ***		
1) Admission's Department		
2) Doctor's Master		
3) Nursing Master		
4) System Administration		
0) Sign-Off		
Current User:	Select one number (0-4) ----> .	

---

Figure 2

---

\*\*\* SELECT ADMIT / DISCHARGE OPTION \*\*\*

---

1) Admit A Patient

2) Discharge A Patient

0) Sign-Off

---

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 3

---

Patient Admission Form

---

Last Name:	Registration No:
First Name:	Medical Diagnosis:
Mid Initial:	Physician:
Rate/Rank:	Prognosis:
FMP-SSN: -	Allergies:
Birthdate: / /	Nursing Ward:
Age:	Room Number:
Sex:	Bed:
Admit Date: / /	

---

Figure 3.1

---

\*\*\* DISCHARGE A PATIENT \*\*\*

---

FMP-SSN	Patient Name	Practitioner
---------	--------------	--------------

0) Sign-off   1) Next Patient   2) Discharge Patient   3) Admit/Discharge Scr

---

Current User:	Select one number [0-3] ----> .
---------------	---------------------------------

---

Figure 3.2

---

** Nurse's Station Selection **	Date	Time
---------------------------------	------	------

\*\*\* Select Nursing Unit to Display Patients \*\*\*

---

1) 2E   Surgical Ward	
2) 3E   Medical Ward	

0) Sign-Off	3) Master Screen
-------------	------------------

---

Current User:	Select one number [0-3] ----> .
---------------	---------------------------------

---

Figure 4

** Patient Selection **		Ward 2E Surgical	Date	Time
*** Select Patient ***				
	RM BED	PATIENT		
	1) 1 A			
	2) 1 B			
	3) 2 A			
	4) 2 B			
	5) 3 A			
	6) 3 B			
0) Sign-Off		7) Master Screen		
Current User:		Select one number (0-7) ----> .		

Figure 4.1a

** Patient Selection **		Ward 3E Medical	Date	Time
*** Select Patient ***				
	RM BED	PATIENT		
	1) 1 A			
	2) 1 B			
	3) 2 A			
	4) 2 B			
	5) 3 A			
	6) 3 B			
0) Sign-Off		7) Master Screen		
Current User:		Select one number (0-7) ----> .		

Figure 4.1b

Ward Room Bed	Patient	Reg #	Date	Time
*** DOCTOR'S MASTER SCREEN ***				
1) Order Entry 2) Admit / Transfer / Discharge Patient 3) Review Medical Orders 4) Print Medical Orders 5) Discontinue An Order				
0) Sign-Off		6) Master Screen		
Current User:		Select one number (0-6) ----> .		

Figure 4.1.1

Ward Room Bed	Patient	Reg #	Date	Time
*** DOCTOR'S ORDER MENU ***				
1) Activity 2) Diet 3) IV's / Blood 4) Laboratory Tests 5) Monitoring		6) Pharmacy 7) Radiology 8) Respiratory Therapy 9) Vital Signs 10) Ward Routines		
00) Sign-Off		11) Doctor's Master Screen		12) Master Screen
Current User:		Select one number (00-12) ----> ..		

Figure 4.1.1.1

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT ACTIVITY LEVEL ***				
1) Ambulate ad lib		7) Dangle Legs		
2) Ambulate w/ Assistance		8) Keep on Back		
3) Strict Bedrest		9) May Shower		
4) Bedrest w/ BRP		10) Turn Patient		
5) Bedside Commode		11) Turning Frame		
6) OOB to Stretcher w/ Assist		12) Up in Chair w/ Assist		
0) Sign-Off	13) Doctor's Order Screen	14) Master Screen		
Current User:	Select one number (00-14) --->			

Figure 4.1.1.1a

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT TIME/FREQUENCY OPTION ***				
1) PRN	* Daily @	20) 2200	30) Q Shift	
2) Q 1-2 Hr PRN	10) 0200	21) 2400	31) QID	
3) Q 2-3 Hr PRN	11) 0400		32) Q 6 Hr	
4) Q 3-4 Hr PRN	12) 0600	22) BID	33) x 4	
	13) 0800	23) Q 12 Hr	34) Q 4 Hr	
5) On Call	14) 1000	24) x 2	35) x 6	
6) QD	15) 1200	25) TID		
7) HS	16) 1400	26) AC	36) Q 2 Hr	
8) x 1	17) 1600	27) PC	37) x 12	
9) Today @	18) 1800	28) Q 8 Hr	38) Q 1 Hr	
....	19) 2000	29) x 3	39) x 24	
40) Help	41) Return to Calling Screen			
Current User:	Select one number (01-41) ---> ..			

Figure 4.1.1.1b

---

HELP SCREEN FOR THE TIME MODULE

---

Hospital policy dictates the exact time for standardized abbreviations.

---

1-4) PRN	31-33) Four times a day frequency QID -- 0900, 1300, 1700, 2100 Q 6 Hr -- 0600, 1200, 1800, 2400
5-21) Single dosages QD -- 0900 HS -- 2200	34-35) Six times a day frequency Q 4 Hr -- 0200, 0600, 1000, 1400, 1800, 2200
22-24) Twice a day frequency BID -- 0900 & 2100 Q 12 Hr -- 1200 & 2400	36-37) Twelve times a day frequency Q 2 Hr -- Even hours
25-30) Three times a day frequency TID -- 0900, 1400, 2100 AC -- 0700, 1100, 1700 PC -- 0900, 1300, 1900 Q 8 Hr -- 0600, 1400, 2200 Q Shift -- 0900, 1700, 0200	38-39) 24 times a day frequency Q 1 Hr -- On the hour
	41) No frequency will be assigned

---

Figure 4.1.1.1c

---

Ward Room Bed	Patient	Reg #	Date	Time		
*** SELECT DIET ***						
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> 1) As Tolerated  2) Clear Liquids  3) Diabetic  4) Fat-controlled  5) Full Liquids  6) Infant / Neonatal Bottle x1  7) Infant / Neonatal Bottle x6  8) Infant / Neonatal Bottle x12  9) Mechanical Soft </td> <td style="width: 50%; vertical-align: top;"> 10) Na Controlled  11) NPO  12) NPO p 2400  13) NPO w/ ice chips  14) Regular  15) Renal &amp; Liver Disease  16) T &amp; A  17) Tube Feedings (cont / bags)  18) Tube Feedings (bolus) </td> </tr> </table>					1) As Tolerated 2) Clear Liquids 3) Diabetic 4) Fat-controlled 5) Full Liquids 6) Infant / Neonatal Bottle x1 7) Infant / Neonatal Bottle x6 8) Infant / Neonatal Bottle x12 9) Mechanical Soft	10) Na Controlled 11) NPO 12) NPO p 2400 13) NPO w/ ice chips 14) Regular 15) Renal & Liver Disease 16) T & A 17) Tube Feedings (cont / bags) 18) Tube Feedings (bolus)
1) As Tolerated 2) Clear Liquids 3) Diabetic 4) Fat-controlled 5) Full Liquids 6) Infant / Neonatal Bottle x1 7) Infant / Neonatal Bottle x6 8) Infant / Neonatal Bottle x12 9) Mechanical Soft	10) Na Controlled 11) NPO 12) NPO p 2400 13) NPO w/ ice chips 14) Regular 15) Renal & Liver Disease 16) T & A 17) Tube Feedings (cont / bags) 18) Tube Feedings (bolus)					
<div style="display: flex; justify-content: space-between;"> <span>00) Sign-Off</span> <span>19) Doctor's Order Screen</span> <span>20) Master Screen</span> </div>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%; border-right: 1px solid black; padding-right: 10px;">Current User:</td> <td style="padding-left: 10px;">Select one number (00-20) ---&gt;</td> </tr> </table>					Current User:	Select one number (00-20) --->
Current User:	Select one number (00-20) --->					

---

Figure 4.1.1.1d

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT IV ORDER ***				
• IV ORDERS •				
1) Start IV of	.45 NaCl	Over 30 Min		
2) Alternate IV with	Ringer's Lactate	Over 1 Hr		
3) Follow Present IV w/	DS Ringer's Lactate	Over 2 Hr		
4) Interrupt IV for	DS Water	Over 4 Hr		
5) Start Second IV of	Normal Saline	Over 6 Hr		
	DS Normal Saline	Over 8 Hr		
6) Discontinue IV		Over 12 Hr		
7) Insert Heparin Lock	Whole Blood	Over 24 Hr		
8) Use Multilumen Line	Packed Cells			
00) Sign-Off	09) Doctor's Order Screen	10) Master Screen		
Current User:	Select one number (00-10) ----> ss			

Figure 4.1.1.1e

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT IV SOLUTION ***				
• SOLUTION •				
Start IV of	1) DS .45 NaCl	Over 30 Min		
Alternate IV with	2) Ringer's Lactate	Over 1 Hr		
Follow Present IV c	3) DS Ringer's Lactate	Over 2 Hr		
Interrupt IV for	4) DS Water	Over 4 Hr		
Start Second IV of	5) Normal Saline	Over 6 Hr		
	6) DS Normal Saline	Over 8 Hr		
Discontinue IV		Over 12 Hr		
Insert Heparin Lock	7) Whole Blood	Over 24 Hr		
Use Multilumen Line	8) Packed Cells			
Current User:	Select one number (1-8) ----> .			

Figure 4.1.1.1f



Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT INFUSION RATE ***				
• INFUSION RATE •				
Start IV of	.45 NaCl	1)	Over 30 Min	
Alternate IV with	Ringer's Lactate	2)	Over 1 Hr	
Follow Present IV w/	DS Ringer's Lactate	3)	Over 2 Hr	
Interrupt IV for	DS Water	4)	Over 4 Hr	
Start Second IV of	Normal Saline	5)	Over 6 Hr	
	DS Normal Saline	6)	Over 8 Hr	
Discontinue IV		7)	Over 12 Hr	
Insert Heparin Lock	Whole Blood	8)	Over 24 Hr	
Use Multilumen Line	Packed Cells			
Current User:	Select one number (1-8) ----> .			

Figure 4.1.1.1g

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT LABORATORY TEST ***				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>• CHEMISTRY •</p> <p>1) Bilirubin</p> <p>2) BUN</p> <p>3) Calcium</p> <p>4) Chloride</p> <p>5) CO2</p> <p>6) Creatinine</p> <p>7) Glucose</p> <p>8) Phosphate</p> <p>9) Potassium</p> <p>10) Sodium</p> <p>11) Uric Acid</p> </div> <div style="width: 30%;"> <p>• ENZYMES •</p> <p>12) Amylase</p> <p>13) CPK</p> <p>14) LDM</p> <p>15) SGOT</p> <p>16) SGPT</p> <p>• HEMATOLOGY •</p> <p>17) CBC</p> <p>18) Platelets</p> <p>19) Protine</p> <p>20) Sed Rate</p> </div> <div style="width: 30%;"> <p>• OTHER •</p> <p>21) ABO &amp; Rh</p> <p>22) ABG (From A-line)</p> <p>23) ABG (stick)</p> <p>24) Blood Culture</p> <p>25) Culture &amp; Sensitivity</p> <p>26) Cold Agglutins</p> <p>27) HCG</p> <p>28) Occ Blood in Stools</p> <p>29) RPR</p> <p>30) SMA 6</p> <p>31) UA</p> </div> </div>				
00) Sign-Off	32) Doctor's Order Screen	33) Master Screen		
Current User:	Select one number (00-33) --->			

Figure 4.1.1.1h

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT MONITORING REQUIREMENTS ***				
1) Apnea Monitor			10) ICP [Monitor] Set-up	
2) A-line Set-up			11) Manual ICP Readings	
3) A-line Readings			12) Monitor ICP Readings	
4) Cardiac Monitor			13) Neuro Checks	
5) Cardiac Output			14) Pressure Monitor	
6) Circulation Checks			15) PAP/PA Wedge Readings	
7) CUP Readings [Manually]			16) Swan-Ganz Set-up	
8) Fundus Checks			17) Temperature Monitor	
9) Intake & Output			18) Transcutaneous Monitoring	
00) Sign-Off	19) Doctor's Order Screen	20) Master Screen		
Current User:	Select one number [00-19] ---->			

Figure 4.1.1.1i

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT DESIRED MEDICATION / DOSAGE ***				
<b>** ANTIHISTAMINE **</b> • Benadryl 1) 25 mg [O] 2) 50 mg [IM] 3) 50 mg [IV] • Dimetapp 4) 4 mg [O] 5) 5 mg Elxr [O] • Phenergan 6) 25 mg [O] 7) 25 mg [IM] 8) 25 mg [SP]		<b>** ANTI-INFECTIVE **</b> • Ampicillin 9) 250 mg [O] 10) 500 mg [IM] 11) 500 mg [IV] • Ancef 12) .5 Gm [IM] 13) .5 Gm [IV] • Cefadyl 14) 500 mg [IM] 15) 1.0 Gm [IM] 16) 1.0 Gm [IV]		
		• Erythromycin 17) 250 mg [O] 18) 200 mg Susp [O] • Keflex 19) 250 mg [O] 20) 125 mg Susp [O] • Sulfacetamine Na 21) 10% Salt [Op] • Tetracycline 22) 250 mg [O] 23) 500 mg [IV]		
24) Help	25) Next Screen [More Meds]	26) Dr's Ord Screen	27) Master Scree	
Current User:	Select one number [01-27] ---->			

Figure 4.1.1.1j

Ward Room Bed	Patient	Reg #	Date	Time	
*** SELECT DESIRED MEDICATION / DOSAGE ***					
<b>** ANTISEPTIC **</b> • Boric Acid 1) 5% Salt (I)		<b>** CARDIOVASCULAR **</b> • Digoxin 7) .125 mg (O) 8) .250 mg (O) • Inderal 9) 10 mg (O) 10) 40 mg (O) 11) 1 mg (IV) • Minipress 12) 1 mg (O) 13) 2 mg (O) 14) 5 mg (O)		<b>** CNS DRUGS **</b> • Dilantin 15) 100 mg (O) 16) 125 mg Susp (O) • Elavil 17) 10 mg (O) 18) 25 mg (O) 19) 50 mg (O) • Phenobarbital 20) 15 mg (O) 21) 30 mg (O) 22) 60 mg (IM)	
<b>** AUTONOMIC **</b> • Atropine 2) 0.4 mg (O) 3) 0.4 mg (IM) • Valium 4) 5 mg (O) 5) 5 mg (IM) 6) 5 Gm (IV)		23) Help                      24) Previous Screen			
Current User:		Select one number (01-24) --->			

Figure 4.1.1.1k

#### HELP SCREEN FOR PHARMACY MODULES

This Help Facility explains abbreviations used in parenthesis. If the user requires additional information on medications or dosages, they should consult the PHYSICIAN'S DESK REFERENCE (PDR) or contact a Pharmacy Officer. The abbreviations indicate the route of administration:

(O) Oral	(I) Irrigation
(IM) Intramuscular	(Op) Ophthalmic
(IV) Intravenous	(SQ) Subcutaneous
(Sp) Suppository	

Figure 4.1.1.11

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT X-RAY ***				
1) Abdomen Flat Plate		10) CT Scan		
2) Abdomen AP		11) Gallbladder Series		
3) Abdomen 3-way		12) IVP		
4) Angiography		13) Sinus Series		
5) Arteriography		14) Skull		
6) Barium Enema		15) Spine		
7) Brain Scan		16) Tomography		
8) Chest PA		17) Upper GI Series		
9) Chest Lateral		18) Ultrasound		
00) Sign-Off	19) Doctor's Order Screen	20) Master Screen		
Current User:	Select one number (00-20) ---->			

Figure 4.1.1.1m

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT RESPIRATORY THERAPY OPTIONS * THEN FLOW RATE FOR ROUTE ***				
** RESPIRATORY THERAPY **		* Flow Rate *		
1) Chest Pulmonary Therapy	8) Wean from Ventilator	A) 1-2 liters/min		
2) Cough & Deep Breath		B) 3-4 liters/min		
3) Incentive Spirometer	* Route *	C) 5-6 liters/min		
4) IPPB	9) Croup Tent	D) 7-8 liters/min		
5) Suctioning	10) Mask	E) 9-10 liters/min		
6) Tracheostomy Care	11) Mist Tent			
7) Ventilator	12) Nasal Prongs			
	13) Oxyhood			
00) Sign-Off	14) Doctor's Order Screen	15) Master Screen		
Current User:	Select one number (00-15) ----> ..			
	Select one letter (A-E) -----> .			

Figure 4.1.1.1n

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT VITAL SIGN OPTION ***				
• ROUTINE • 1) T-P-R, B/P 2) Post-op 3) Post Partum 4) Post Newborn		• SPECIAL • 5) FHT 6) Pulse Apical 7) Pulse Femoral 8) Pulse Pedal 9) Temp Axillary 10) Temp Rectal 11) Tilt Test		
00) Sign-Off	12) Doctor's Order Screen	13) Master Screen		
Current User:	Select one number (00-13) ---->			

Figure 4.1.1.1o

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT WARD ROUTINE ***				
1) Ace Wrap Lower Ext 2) Chest Tube Insertion 3) Circumcision Care 4) Complex Drsg Change 5) EKG Rhythm Strip 6) Foley Cath Care 7) Foley Cath Insertion 8) Guiac Stools 9) Isolation Respiratory 10) " Reverse 11) " Strict	12) Lumbar Puncture 13) N-G Insertion 14) Paracentesis 15) Phototherapy 16) Range of Motion Exercises (Passive) • Restraints 17) 2-Point 18) 4-Point 19) Posey	20) Simple Drsg Change 21) Spec Gravity 22) Spin HCT 23) Straight Cath 24) Surgical Shave Prep 25) SS Enema 26) Tap Water Enema 27) Thoracentesis 28) Tube Care (not trach) 29) Urine for S & A		
00) Sign-Off	30) Doctor's Order Screen	31) Master Screen		
Current User:	Select one number (00-31) ---->			

Figure 4.1.1.1p

Ward Room Bed	Patient	Reg #	Date	Time
*** ADMIT ** TRANSFER ** DISCHARGE ***				
1) Admit				
2) Transfer				
3) Discharge				
0) Sign-Off		4) Doctor's Order Screen		5) Master Screen
Current User:		Select one number (0-5) ---->		

Figure 4.1.1.2

Patient Orders For: Mary Miser					
Press -- Ctrl and S -- Keys to Pause The Scrolling If Necessary					
Page No.	1				
01/12/86					
Date	Time	Order	Frequency	Practitioner	
01/11/86	14:13:47	Up in Chair w/ Assist	TID	N. Lyon MD	
01/11/86	14:14:23	Diabetic Diet		N. Lyon MD	
01/11/86	14:15:41	Start IV of .45 NaCl	Infuse o 8Hr	N. Lyon MD	
01/12/86	10:17:14	Chloride	Daily @ 0600	N. Lyon MD	
01/12/86	10:17:40	Sodium		N. Lyon MD	
01/12/86	10:18:00	Amylase		N. Lyon MD	
01/12/86	10:18:26	Potassium	Daily @ 0600	N. Lyon MD	
01/12/86	10:18:56	CO2	Daily @ 0600	N. Lyon MD	
01/12/86	10:19:26	CBC	Daily @ 0600	N. Lyon MD	
01/12/86	10:19:54	Platelets	Daily @ 0600	N. Lyon MD	
01/12/86	10:20:18	Glucose	Daily @ 0600	N. Lyon MD	

Figure 4.1.1.3

Word Room Bed	Patient	Reg #	Date	Time
*** DISCONTINUE AN ORDER ***				
Date	Start	Order	Frequency	Practitioner
0) Sign-Off 1) Next Order 2) Discontinue Order 3) Dr's Scrn 4) Master Scrn				
Current User:		Select one number (0-4) ----> .		

Figure 4.1.1.4

Ward	Room	Bed	Patient	Reg #	Date	Time
*** NURSING MASTER SCREEN ***						
1) Enter/Inactivate Nursing Care Plan			5) Review Patient Care Requirements			
2) Review Nursing Care Plan			6) Print Patient Care Requirements			
3) Print Nursing Care Plan			7) Internal Patient Classification			
4) External Patient Classification						
0) Sign-Off			8) Master Screen			
Current User:			Select one number (0-8) ----> .			

Figure 5.1.1

Ward	Room	Bed	Patient	Reg #	Date	Time
*** SELECT THE DESIRED NURSING CARE PLAN FUNCTION ***						
1) Enter a New Care Plan						
2) Inactivate Portions of Care Plans						
0) Sign-Off		3) Nurse's Master Screen			4) Master Screen	
Current User:			Select one number (0-4) ----> .			

Figure 5.1.1.1



Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT NURSING DIAGNOSIS ***				
1) Comfort, Alteration In: Pain				
2) Communication, Impaired: Verbal				
3) Impaired Physical Mobility				
4) Self-Care Deficit				
0) Sign-Off      5) Nurse's Master Screen      6) Master Screen				
Current User:		Select one number (0-6) ----> .		

Figure 5.1.1.1a

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT NURSING ASSESSMENTS FOR A PATIENT WITH **				
** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **				
1) Altered Time Perception	7) Guarding Behavior	12) Self-Focusing		
2) Alteration Muscle Tone	8) Impaired Thought Process	13) Talkative		
3) Autonomic Response	9) Narrowing Focus	14) Verbal Complaint		
4) Distraction Behavior	10) Pacing	15) Vocal Complaints (Moans, Crying)		
5) Facial Mask	11) Patient Report	16) Withdrawal From Social Contact		
6) Other Assessment: [.....]				
Current User:		Select one number (01-16) --->		

Figure 5.1.1.1b

Ward	Room	Bed	Patient	Reg #	Date	Time
** SELECT A RELATED FACTOR FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **						
1) Altered Sensation			5) Surgical Procedure			
2) Disease / Condition			6) Trauma			
3) Emotional State			7) Treatment Regime			
4) Other: [.....]						
Current User:			Select one number (1-7) ---->			

Figure 5.1.1.1c

Ward	Room	Bed	Patient	Reg #	Date	Time
** SELECT A PATIENT GOAL FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMFORT ALTERATION IN: PAIN **						
1) Communicates Pain Free						
2) Communicates Experiences Less Pain						
3) Communicates Experience of Pain More Tolerable						
4) Demos Skills & Knowledge to Achieve Pt Goals						
5) Other Goals: [.....]						
Current User:			Select one number (1-5) ---->			

Figure 5.1.1.1d

Ward	Room	Bed	Patient	Reg #	Date	Time										
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** COMMUNICATES: PAIN FREE, EXPERIENCES LESS/TOLERABLE PAIN OR OTHER GOAL **																
<table border="0"> <tr> <td>1) Assess Pain Factors</td> <td>6) Offer PRN Medications</td> </tr> <tr> <td>2) Assess &amp; Evaluate Pain</td> <td>7) Provide Emotional Support</td> </tr> <tr> <td>3) Encour Pt to Use Coping Strategy</td> <td>8) Schedule "Quiet Times"</td> </tr> <tr> <td>4) Give Info &amp; Explain Proc &amp; Tests</td> <td>9) Teach Alt Coping Strategies</td> </tr> <tr> <td>5) Other Nursing Orders: [.....]</td> <td>10) Utilize Diversional Activities</td> </tr> </table>							1) Assess Pain Factors	6) Offer PRN Medications	2) Assess & Evaluate Pain	7) Provide Emotional Support	3) Encour Pt to Use Coping Strategy	8) Schedule "Quiet Times"	4) Give Info & Explain Proc & Tests	9) Teach Alt Coping Strategies	5) Other Nursing Orders: [.....]	10) Utilize Diversional Activities
1) Assess Pain Factors	6) Offer PRN Medications															
2) Assess & Evaluate Pain	7) Provide Emotional Support															
3) Encour Pt to Use Coping Strategy	8) Schedule "Quiet Times"															
4) Give Info & Explain Proc & Tests	9) Teach Alt Coping Strategies															
5) Other Nursing Orders: [.....]	10) Utilize Diversional Activities															
Current User:			Select one number (01-10) --->													

Figure 5.1.1.1e

Ward	Room	Bed	Patient	Reg #	Date	Time					
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** DEMONSTRATES SKILLS & KNOWLEDGE TO ACHIEVE GOALS **											
• Teach Stress Reduction Techniques <table border="0"> <tr> <td>1) Deep Breathing</td> </tr> <tr> <td>2) Progressive Relaxation</td> </tr> <tr> <td>3) Relaxation Response</td> </tr> <tr> <td>4) Diversional Activity</td> </tr> <tr> <td>5) Other: [.....]</td> </tr> </table>							1) Deep Breathing	2) Progressive Relaxation	3) Relaxation Response	4) Diversional Activity	5) Other: [.....]
1) Deep Breathing											
2) Progressive Relaxation											
3) Relaxation Response											
4) Diversional Activity											
5) Other: [.....]											
Current User:			Select one number (1-5) ---->								

Figure 5.1.1.1f

Ward Room Bed	Patient	Reg #	Date	Time
*** SELECT TIME/FREQUENCY OPTION ***				
1) PRN	• Daily @	20) 2200	30) Q Shift	
2) Q 1-2 Hr PRN	10) 0200	21) 2400	31) QID	
3) Q 2-3 Hr PRN	11) 0400		32) Q 6 Hr	
4) Q 3-4 Hr PRN	12) 0600	22) BID	33) x 4	
	13) 0800	23) Q 12 Hr	34) Q 4 Hr	
5) On Call	14) 1000	24) x 2	35) x 6	
6) QD	15) 1200	25) TID		
7) HS	16) 1400	26) AC	36) Q 2 Hr	
8) x 1	17) 1600	27) PC	37) x 12	
9) Today @	18) 1800	28) Q 8 Hr	38) Q 1 Hr	
....	19) 2000	29) x 3	39) x 24	
40) Help		41) Return to Calling Screen		
Current User:		Select one number (01-41) ---> ..		

Figure 5.1.1.1g

HELP SCREEN FOR THE TIME MODULE	
Hospital policy dictates the exact time for standardized abbreviations.	
1-4) PRN	31-33) Four times a day frequency QID -- 0900, 1300, 1700, 2100 Q 6 Hr -- 0600, 1200, 1800, 2400
5-21) Single dosages QD -- 0900 HS -- 2200	34-35) Six times a day frequency Q 4 Hr -- 0200, 0600, 1000, 1400, 1800, 2200
22-24) Twice a day frequency BID -- 0900 & 2100 Q 12 Hr -- 1200 & 2400	36-37) Twelve times a day frequency Q 2 Hr -- Even hours
25-30) Three times a day frequency TID -- 0900, 1400, 2100 AC -- 0700, 1100, 1700 PC -- 0900, 1300, 1900 Q 8 Hr -- 0600, 1400, 2200 Q Shift -- 0900, 1700, 0200	38-39) 24 times a day frequency Q 1 Hr -- On the hour
	41) No frequency will be assigned

Figure 5.1.1.1h

AD-A169 129

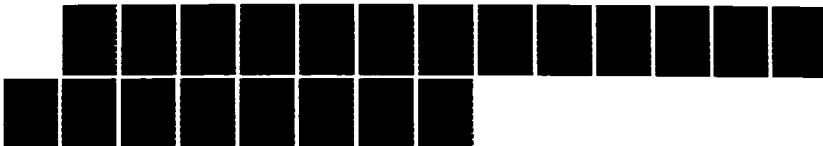
A PROTOTYPE MODEL FOR AUTOMATING NURSING DIAGNOSIS  
NURSE CARE PLANNING AND PATIENT CLASSIFICATION(U) NAVAL  
POSTGRADUATE SCHOOL MONTEREY CA G R HARMEYER MAR 86

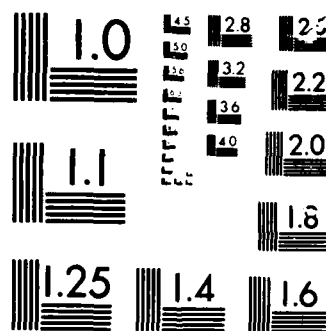
5/3

UNCLASSIFIED

F/G 5/1

NL





0.1

---

You have identified teaching as a nursing intervention. Please specify the type of teaching that will be required. Remember to document the teaching you give to your patient.

- |                              |   |
|------------------------------|---|
| A) Group Teaching            | D) Structured Teaching<br>(ie. diabetic, cardiac,<br>colostomy care, post<br>partum first 24 hr, newborn<br>care, or discharge) |
| B) Preoperative Teaching     |   |
| C) Return to Previous Screen |   |

Select one letter (A-D) ---> .

---

Figure 5.1.1.i

---

You have identified emotional support as a nursing intervention. Emotional support is expected for each patient, but augmented staffing may be required for the following:

• Answer A-C only if emotional support is in excess of 30 min q24h •

- A) Patient/family support (ie. anxiety, denial, loneliness, etc.)
- B) Modification of lifestyle (ie. new prosthesis, body image, behavior modification, etc.)
- C) Sensory deprivation (ie. retarded, deaf, blind, language barrier, bilateral eye patches, confused, combative)
- D) Return to previous screen

Select one letter (A-D) ---> .

---

Figure 5.1.1.j

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT NURSING ASSESSMENTS FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMMUNICATION, IMPAIRED: VERBAL **				
1) Anxiety	6) Inability to Hear	10) Slurring		
2) Disorientation	7) Inability to Speak	11) Stuttering		
3) Fear	8) Incomprehensible Speech	12) Tearfulness		
4) Frustration	9) Refusal to Speak	13) Thought Disorder		
5) Other Assessment: [.....]				
Current User:		Select one number (01-13) --->		

Figure 5.1.1.1k

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A RELATED FACTOR FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF COMMUNICATION, IMPAIRED: VERBAL **				
1) Anatomical Impairment	6) Foreign Language			
2) Cultural Difference	7) Mental Capacity			
3) Developmental Age	8) Sedation			
4) Disease Process	9) Surgical Procedure			
5) Other: [.....]	10) Treatment Regime			
Current User:		Select one number (01-10) --->		

Figure 5.1.1.1l



Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A PATIENT GOAL FOR A PATIENT WITH ** NURSING DIAGNOSIS OF COMMUNICATION, IMPAIRED: VERBAL **				
1) Communicates Needs Thru Words		5) Reports Less Anxiety		
2) Comm Needs Thru Mechanical Tools		6) Reports Less Fear		
3) Demo Skills to Achieve Goals		7) Reports Less Stress		
4) Other Goals: [.....]				
Current User:		Select one number (1-7) ---->		

Figure 5.1.1.1m

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** COMMUNICATES NEEDS THROUGH USE OF WORDS OR MECHANICAL TOOLS **				
1) Apprise Others of Communication Prob		6) Provd Translated Phrase Chart		
2) Provide Emotional Support		7) Provide Translator		
3) Provide Paper & Pencil		8) Simple Ques w/ Y/N Ans		
4) Provide Spelling Board		9) Use Sign Language		
5) Other Nursing Order: [.....]		10) Use Establish Comm For ADL		
Current User:		Select one number (01-10) --->		

Figure 5.1.1.1n

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** REPORTS DECREASED LEVEL OF STRESS, ANXIETY, OR FEAR **				
1) Encourage Patient to Speak Slowly 2) Encour To Util Coping Strategy 3) Explain Proc and Elicit Question 4) Provide Spelling Board 5) Other Nursing Orders: [.....]		6) Provide Translated Phase Chart 7) Provide Translator 8) Simple Questions w/ Y/N Answers 9) Use Sign Language 10) Use Establish Comm for ADL		
Current User:		Select one number (01-10) --->		

Figure 5.1.1.1o

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** DEMONSTRATES SKILLS TO ACHIEVE GOALS **				
• Teach Method Preop for Postop Use 1) Blink 1x For No, 2x For Yes 2) Squeeze Hand For Y/N Response 3) Teach Proper Use of Mech Device 4) Apprise Others of Comm Problem 5) Other Nursing Orders: [.....]		• Teach Stress Reduction Techniques 6) Deep Breathing 7) Diversional Activities 8) Progressive Relaxation 9) Relaxation Response		
Current User:		Select one number (1-9) ---->		

Figure 5.1.1.1p

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT NURSING ASSESSMENTS FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF IMPAIRED PHYSICAL MOBILITY **				
1) Confinement Imposed 2) Fatigues Easily 3) Gait Impairment 4) Impaired Coordination 5) Inability to Ambulate 6) Other: [.....]		7) Inability to Transfer 8) Inability to Turn 9) Limited Range of Motion (ROM) 10) Reluctant to Move 11) Use of Assistive Devices		
Current User:		Select one number (01-11) ---->		

Figure 5.1.1.1q

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A RELATED FACTOR FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF IMPAIRED PHYSICAL MOBILITY **				
1) Decreased Activity Tolerance 2) Musculoskeletal Function 3) Neuromuscular Function 4) Pain / Discomfort 5) Treatment Regime 6) Other: [.....]				
Current User:		Select one number (1-6) ---->		

Figure 5.1.1.1r

Ward	Room	Bed	Patient	Reg #	Date	Time
<p>•• SELECT A PATIENT GOAL FOR A PATIENT WITH ••</p> <p>•• NURSING DIAGNOSIS OF IMPAIRED PHYSICAL MOBILITY ••</p>						
1) Able to Transfer Independently			7) Maintains Full ROM			
2) Able to Transfer w/ Assistance			8) Maintain Pattern of Elimination			
3) Demos Skills to Achieve Goals			9) Maintain Skin Integrity			
4) Increase Range of Motion (ROM)			10) No Additional Contractures			
5) Maint Effective Breathing Pattern			11) Performs ADL			
6) Other Goals: [.....]						
Current User:			Select one number (01-11) --->			

Figure 5.1.1.1s

Ward	Room	Bed	Patient	Reg #	Date	Time
<p>•• SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ••</p> <p>•• MAINTAINS FULL ROM, INCREASES ROM, NO ADDED CONTRACTURES ••</p> <p>•• OR MAINTAINS EFFECTIVE BREATHING PATTERN ••</p>						
1) Active Range Of Motion (ROM)			6) Passive Range Of Motion (ROM)			
2) Cough & Deep Breath			7) Positioning			
3) Encourage Independent ADL			8) Turning			
4) Gradual Increase ADL Activity			9) Accom Pt OFF Ward (>15 <30min)			
5) Other Nursing Orders: [.....]			10) Accom Pt OFF Ward (> 30 min)			
Current User:			Select one number (01-10) --->			

Figure 5.1.1.1t

Ward Room Bed	Patient	Reg #	Date	Time												
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** MAINTAINS SKIN INTEGRITY OR OTHER **																
<table border="0"> <tr> <td>1) Ambulate</td> <td>7) Position</td> </tr> <tr> <td>2) Assist to Select Diet</td> <td>8) Protect Boney Prominences</td> </tr> <tr> <td>3) Encourage Independent ADL</td> <td>9) Protect Pressure Areas</td> </tr> <tr> <td>4) Massage to Promote Circulation</td> <td>10) Provide Safe Environment</td> </tr> <tr> <td>5) Personal Possessions w/in Reach</td> <td>11) Siderails</td> </tr> <tr> <td colspan="2">6) Other Nursing Orders: [.....]</td> </tr> </table>					1) Ambulate	7) Position	2) Assist to Select Diet	8) Protect Boney Prominences	3) Encourage Independent ADL	9) Protect Pressure Areas	4) Massage to Promote Circulation	10) Provide Safe Environment	5) Personal Possessions w/in Reach	11) Siderails	6) Other Nursing Orders: [.....]	
1) Ambulate	7) Position															
2) Assist to Select Diet	8) Protect Boney Prominences															
3) Encourage Independent ADL	9) Protect Pressure Areas															
4) Massage to Promote Circulation	10) Provide Safe Environment															
5) Personal Possessions w/in Reach	11) Siderails															
6) Other Nursing Orders: [.....]																
Current User:		Select one number (01-11) ---->														

Figure 5.1.1.1u

Ward Room Bed	Patient	Reg #	Date	Time										
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** MAINTAINS PATTERN OF ELIMINATION OR PERFORMS ADL ** ** AFTER SOME SELECTIONS YOU WILL BE ASKED FOR FREQUENCY **														
<table border="0"> <tr> <td>1) Ambulate with Assistance</td> <td>6) Range OF Motion (ROM)</td> </tr> <tr> <td>2) Increase Independence Doing ADL</td> <td>7) Select Diet to Promote GI Function</td> </tr> <tr> <td>3) Plan for Continuing Care</td> <td>8) Turn</td> </tr> <tr> <td>4) Position</td> <td></td> </tr> <tr> <td colspan="2">5) Other Nursing Orders: [.....]</td> </tr> </table>					1) Ambulate with Assistance	6) Range OF Motion (ROM)	2) Increase Independence Doing ADL	7) Select Diet to Promote GI Function	3) Plan for Continuing Care	8) Turn	4) Position		5) Other Nursing Orders: [.....]	
1) Ambulate with Assistance	6) Range OF Motion (ROM)													
2) Increase Independence Doing ADL	7) Select Diet to Promote GI Function													
3) Plan for Continuing Care	8) Turn													
4) Position														
5) Other Nursing Orders: [.....]														
Current User:		Select one number (1-8) ---->												

Figure 5.1.1.1v

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** ABLE TO TRANSFER INDEPENDENTLY OR WITH ASSISTANCE **				
1) Assist: Bed to Chair		4) Provide Helping Person		
2) Assist: Bed to Wheelchair		5) Provide Mechanical Aid		
3) Other Nursing Orders: [.....]				
Current User:		Select one number (1-5) ---->		

Figure 5.1.1.1w

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** DEMOS SKILLS TO ACHIEVE GOALS **				
1) Provide Opport To Practice Skills		5) Teach Required Exercise		
2) Teach Factors for Impaired Mobity		6) Teach Use of Adjuncts/Aids		
3) Teach Rationale for Skills				
4) Other Nursing Orders: [.....]				
Current User:		Select one number (1-6) ---->		

Figure 5.1.1.1x

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT NURSING ASSESSMENTS FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF SELF-CARE DEFICIT **				
1) Unable to Cloth Self	7) Unable to Get to BR	11) Unable to do Toile Hygiene		
2) Unable to Cut Food	8) Unable to Maint Appear	12) Unable to Rise Off Toilet		
3) Unable to Drink	9) Unable to Select Cloth	13) Unable to Flush Toilet		
4) Unable to Fasten Cloth	10) Unable to Sit on Toilet/Commode	14) Unable to Wash Sel		
5) Unable to Feed Self				
6) Other Assessment: [.....]				
Current User:		Select one number (01-14) --->		

Figure 5.1.1.1y

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A RELATED FACTOR FOR A PATIENT WITH ** ** NURSING DIAGNOSIS OF SELF CARE: DEFICIT **				
1) Activity Intolerance	6) Neuromuscular Impairment			
2) Depression	7) Pain/Discomfort			
3) Developmental Phase	8) Perceptual Impairment			
4) Musculoskeletal Function	9) Sensory Impairment			
5) Other: [.....]	10) Severe Anxiety			
Current User:		Select one number (01-10) --->		

Figure 5.1.1.1z

Word	Room	Bed	Patient	Reg #	Date	Time
<p>•• SELECT A PATIENT GOAL FOR A PATIENT WITH A ••</p> <p>•• NURSING DIAGNOSIS OF SELF-CARE: DEFICIT ••</p> <p>•• THEN SELECT CURRENT LEVEL OF CARE REQUIRED ••</p>						
			<p>• Patient Goal •</p>		<p>• Current Level •</p>	
			<p>1) Functions @ Level 0: Full Self Care</p>		<p>A) Infant/Toddler Care</p>	
			<p>2) Functions @ Level 1: Use of Equip or Device</p>		<p>B) Self/Minimum Care</p>	
			<p>3) Functions @ Level 2: Needs Assist/Supervise</p>		<p>C) Assisted Care</p>	
			<p>4) Functions @ Level 3: Needs Assist &amp; Use Device</p>		<p>D) Complete Care</p>	
			<p>5) Functions @ Level 4: Dependent &amp; Does Not Participate</p>		<p>E) Total Care</p>	
Current User:			<p>Select one number (1-5) ----&gt;</p> <p>Select one letter (A-E) ----&gt;</p>			

Figure 5.1.1.1aa

Word	Room	Bed	Patient	Reg #	Date	Time
<p>•• SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ••</p> <p>•• FUNCTIONS AT LEVEL 0: FULL SELF-CARE ••</p>						
<p>1) Support Increasing Independence in ADL (ie. feeding, bathing, toileting, dressing, grooming, etc.)</p>						
<p>2) Peds Recreation/Observation</p>						
<p>3) Other Nursing Orders: [.....]</p>						
Current User:			<p>Select one number (1-3) ----&gt;</p>			

Figure 5.1.1.1ab



Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** FUNCTIONS AT LEVEL 1: NEEDS EQUIPMENT OR DEVICE **				
1) Provide Equip For Bathing  2) Provide Equip For Dressing  3) Provide Equip For Feeding  4) Other Nursing Orders: [.....]		5) Provide Equip For Toileting  6) Peds Recreation/Observation  7) Spoon Feed Adult Patient  8) Spoon Feed Child (<6)		
Current User:		Select one number (1-8) ---->		

Figure 5.1.1.1ac

Ward Room Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** FUNCTIONS AT LEVEL 2: NEEDS ASSISTANCE/SUPERVISION OR OTHER **				
1) Assist to Dress  2) Assist To/From Bathroom  3) Assist w/ Partial Bath  4) Assist: Comb/Brush Hair  5) Dress Patient  6) Other: [.....]		7) Feed Adult Patient  8) Give Emotional Support  9) Give Complete Bath  10) Keep Commode @ Bedside  11) Kp Urinal/Bedpan Near		
		12) Peds Recreation/Obs  13) Set up Food Tray  14) Shave Patient  15) Socialize During Mec  16) Spoon Feed Child		
Current User:		Select one number (01-16) ---->		

Figure 5.1.1.1ad

Ward	Room	Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** FUNCTIONS AT LEVEL 3: NEEDS ASSISTANCE AND USES EQUIP **						
1) Assist to Dress	7) Feed Adult Patient	12) Provide Necessary Eqr				
2) Assist To/From Bathroom	8) Give Emotional Support	13) Provide For Hygiene				
3) Assist w/ Partial Bath	9) Give Complete Bath	14) Set Up Food Tray				
4) Assist: Comb/Brush Hair	10) Keep Commode @ Bedside	15) Spoon Feed Child (<6				
5) Dress Patient	11) Kp Urinal/Bedpan Near	16) Ped's Recreation/Obs				
6) Other: [.....]						
Current User:			Select one number (01-16) --->			

Figure 5.1.1.1ae

Ward	Room	Bed	Patient	Reg #	Date	Time
** SELECT A NURSING ORDER FOR A PATIENT WHOSE GOAL IS ** ** FUNCTIONS AT LEVEL 4: DEPENDENT AND DOES NOT PARTICIPATE **						
1) Assist To/From Bathroom	7) Give Complete Bath	12) Spoon Feed Child (<6				
2) Assist To/From Commode	8) Give Emotional Support	13) Other Act (>15 <30mn				
3) Assist: Comb/Brush Hair	9) Provide For Oral Hygen	14) Other Act (>30 <1 hr				
4) Dress Patient	10) Provide Personal Hygen	15) Special Proc (>1 <2h				
5) Feed Adult Patient	11) Provide Urinal/Bedpan	16) Xtra Linen Chge/ Partial Bath				
6) Other: [.....]						
Current User:			Select one number (01-16) --->			

Figure 5.1.1.1af

Ward Room Bed	Patient	Reg #	Date	Time
*** INACTIVATE A NURSING CARE PLAN ***				

Date	Time	Nursing Diagnosis	Assessment
Related To Factor		Patient Goal	
Nursing Order		Frequency	Emotion/Teach Nurse
0) Sign-Off   1) Next Plan   2) Inactivate Plan   3) Return   4) Master Screen			
Current User:		Select one number (0-4) ----> .	

Figure 5.1.1.1ag

Press -- Ctrl and S -- Keys to Pause The Scrolling If Necessary

Page No.       1  
03/04/86

Date	Time	Nursing Diagnosis	Assessment
Related To		Patient Goal	
Nursing Order		Frequency	Emotional/Teach Nurse
01/01/86 10:06:24	Comfort	Alteration In: Pain	Alteration In Muscle Tone
	Disease / Condition	Communicates	Experience Tolerable Pain
	Teach Alt Coping Strategies		Structured Teaching G. Harmeyer
01/01/86 10:08:12	Impaired Physical Mobility		Reluctant To Move
	Musculoskeletal Function	Able To Transfer With Assistance	
	Assist Bed To Wheelchair	TID	Structured Teaching G. Harmeyer
01/01/86 10:10:58	Self-Care Deficit		Unable To Do Toilet Hygiene
	Neuromuscular Impairment	Func @ Level 2, Needs Assist/Supervis	
	Keep Commode @ Bedside	TID	Structured Teaching G. Harmeyer

Figure 5.1.1.2

---

Press -- Ctrl and S -- Keys To Pause The Scrolling If Necessary  
Page No. 1  
01/12/86

Date	Time	Order	Frequency	Practitioner
01/11/86	10:06:20	Teach Alt Coping Strategies		G. Harmeyer RN
01/11/86	12:08:07	Assist Bed To Wheelchair	TID	N. Lyons MD
01/11/86	13:10:15	Self/Minimum Care		G. Harmeyer RN
01/11/86	13:10:53	Keep Commode @ Bedside	TID	G. Harmeyer RN
01/11/86	14:13:47	Up in Chair w/ Assist	TID	N. Lyons MD
01/11/86	10:14:23	Diabetic Diet		N. Lyons MD
01/12/86	10:17:14	Chloride	Daily @ 0600	T. Bui MD
01/12/86	10:17:40	Sodium		T. Bui MD
01/12/86	10:18:00	Amylase		T. Bui MD
01/12/86	10:18:26	Potassium	Daily @ 0600	T. Bui MD
01/12/86	10:18:56	CO2	Daily @ 0600	T. Bui MD
01/12/86	10:19:26	CBC	Daily @ 0600	T. Bui MD
01/12/86	10:19:54	Platelets	Daily @ 0600	T. Bui MD
01/12/86	10:20:18	Glucose	Daily @ 0600	T. Bui MD
01/12/86	10:22:02	Intake & Output	TID	T. Bui MD

---

Figure 5.1.1.3

---

Patient: Mary Miser  
Is In: Category II  
Point Value Is: 27

---

Figure 5.1.1.4

---

\*\*\* SELECT ADD / DELETE A USER \*\*\*

---

1) Add A User

2) Delete A User

0) Sign-Off

Current User:	Select one number (0-2) ----> .
---------------	---------------------------------

---

Figure 6

---

USER INFORMATION

\*\*\* THIS INFORMATION IS CONFIDENTIAL \*\*\*

---

First Initial: .

Middle Initial:

Last Name:

Category of Requestor:

Password:

Access Level:

---

Figure 6.1

---

\*\*\* DELETE A USER \*\*\*

---

User's Name	Category	Access Level
-------------	----------	--------------

0) Sign-Off	1) Next User	2) Delete User	3) Add/Delete Scr
-------------	--------------	----------------	-------------------

---

Current User:	Select one number (0-3) ----> .
---------------	---------------------------------

---

Figure 6.2

## APPENDIX G

### DATABASE STRUCTURE

Structure of the four databases used in the prototype project. Names have been elongated to provide more meaning for the reader.

#### Patient database

Field name	Type	Width
LAST NAME	Character	20
FIRST NAME	Character	12
MIDDLE NAME	Character	3
RATE/RANK	Character	11
FMPSSN	Character	12
BIRTH DATE	Date	8
AGE	Character	3
SEX	Character	1
ADMISSION DATE	Date	8
REGISTRATION NUMBER	Character	8
MEDICAL DIAGNOSIS	Character	24
PHYSICIAN	Character	24
PROGNOSIS	Character	3
ALLERGIES	Character	24
WARD	Character	2
ROOM	Character	1
BED	Character	1

#### Order database

Field name	Type	Width
FMPSSN	Character	12
ORDER	Character	27
FREQUENCY	Character	12
TIME	Character	8
DATE	Character	8
PRACTITIONER	Character	20
QUALIFIER	Character	6
TODAYONLY	Character	1
PATIENT POINTS	Numeric	3
MODULE	Character	1
MONITOR POINTS	Numeric	2
EMOTION POINTS	Numeric	2
ROUTINE POINTS	Numeric	2

Nursing core database

Field name	Type	Width
FMPSSN	Character	12
NURSING DIAGNOSIS	Character	30
NURSING ASSESSMENT	Character	27
RELATED FACTORS	Character	25
PATIENT GOAL	Character	38
NURSE'S ORDER	Character	27
DATE	Date	8
TIME	Character	8
NURSE	Character	20
FREQUENCY	Character	12
EMOTIONAL/TEACHING REQUIREMENTS	Character	19

User's information database

Field name	Type	Width
USER'S FIRST INITIAL	Character	2
USER'S MIDDLE INITIAL	Character	3
USER'S LAST NAME	Character	12
REQUESTOR	Character	3
PASSWORD	Character	5
ACCESS LEVEL	Numeric	1



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